



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 163264

TO: Ben Sackey
Location: REM 5B31/5C18
Art Unit: 1626
August 22, 2005

Case Serial Number: 10/687411

From: P. Sheppard
Location: Remsen Building
Phone: (571) 272-2529

sheppard@uspto.gov

Search Notes

FOR OFFICIAL USE ONLY

ACCESS DB # _____
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Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: BEN SACKER Examiner #: 73489 Date: 8/11/05
Art Unit: 1626 Phone Number: 2- 0704 Serial Number: 101 682 411
Location (Bldg/Room#): Rem 5B31 (Mailbox #): 5C 18 Results Format Preferred (circle): PAPER DISK

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Water resistant catalyst for the production of diacyl carbonates
Inventors (please provide full names): Soloveichik et al.

Earliest Priority Date: 7/01/5703

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

A method for making a diacyl carbonate comprising contacting a mixture of phenolic compound with carbon monoxide and oxygen in the presence of carbonylation catalyst comprising palladium, a co-catalyst, a base, a halide source and a chemical additive for increasing the amount of diacyl carbonate.

Please see the selection of phenolic compounds attached.

Thanks

=> d his ful

(FILE 'HOME' ENTERED AT 11:04:42 ON 22 AUG 2005)

FILE 'REGISTRY' ENTERED AT 11:05:09 ON 22 AUG 2005

L1 STR
 L2 6856 SEA SSS FUL L1
 L3 125595 SEA ABB=ON PLU=ON ACTIVATING(W) SOLVENT OR ETHER? OR SULFONE?
 OR NITRILES OR AMIDES OR CARBONATE? OR POLYETHER? OR DIGLYME
 OR TRIGLYME OR TETRAGLYME
 E SOLVENT
 L4 1255 SEA ABB=ON PLU=ON SOLVENT OR SOLVENTS
 L5 95 SEA ABB=ON PLU=ON NITRILE?/CN
 L6 786 SEA ABB=ON PLU=ON AMIDE?/CN
 L7 16418 SEA ABB=ON PLU=ON PHENOLIC OR CRESOL OR 4-FLUOROPHENOL?/CN
 OR BISPHENOL A?/CN OR METHYL SALICYLATE?/CN
 L8 1 SEA ABB=ON PLU=ON PHENOL/CN

FILE 'HCAPLUS' ENTERED AT 11:12:12 ON 22 AUG 2005

L9 24018 SEA ABB=ON PLU=ON L2 OR DIARYL(W) CARBONATE
 L10 2183760 SEA ABB=ON PLU=ON L3 OR L4 OR L5 OR L6 OR ACTIVATING(W) SOLVEN
 T OR ETHER? OR SULFONE? OR NITRILE OR AMIDE OR CARBONATE? OR
 POLYETHER? OR DIGLYME OR TRIGLYME OR TETRAGLYME
 L11 570160 SEA ABB=ON PLU=ON L7 OR L8 OR PHENOLIC OR CRESOL OR 4(W) FLUOR
 OPHENOL? OR BISPHENOL(W)A OR METHYL(W) SALICYLATE? OR PHENOL
 L12 5461 SEA ABB=ON PLU=ON L9(L) PREPARATION/RL
 L13 335274 SEA ABB=ON PLU=ON REACTANT/RL(L) L10
 L14 65329 SEA ABB=ON PLU=ON REACTANT/RL(L) L11
 L15 677 SEA ABB=ON PLU=ON L12 AND L13 AND L14

FILE 'REGISTRY' ENTERED AT 11:22:23 ON 22 AUG 2005

L16 101866 SEA ABB=ON PLU=ON PALLADIUM OR ACETYLACETONATE
 L17 19213 SEA ABB=ON PLU=ON CARBON MONOXIDE?/CN OR OXYGEN
 L19 17811 SEA ABB=ON PLU=ON (TETRAMETHYLAMMONIUM OR TETRAMETHYL(L) AMMON
 IUM OR PHOSPHONIUM OR AMMONIUM OR LITHIUM OR SODIUM OR
 POTASSIUM)(L) HYDROXIDE OR (AMINE OR TRIETHYLAMINE OR
 TRIALKYLAMINE)(L) HYDRATE
 L20 165455 SEA ABB=ON PLU=ON HALIDE OR BROMIDE OR (LITHIUM OR MAGNESIUM)
 (L) BROMIDE OR (AMMONIUM OR PHOSPHONIUM)(W) HALIDE OR ALKALI
 METAL?/CN

FILE 'HCAPLUS' ENTERED AT 11:53:08 ON 22 AUG 2005

L22 197938 SEA ABB=ON PLU=ON L16 OR PALLADIUM OR ACETYLACETONATE
 L23 1846505 SEA ABB=ON PLU=ON L17 OR CARBON(W) MONOXIDE OR CO OR OXYGEN
 OR O2
 L24 904208 SEA ABB=ON PLU=ON L19 OR BASE OR (PHOSPHONIUM OR ?AMMONIUM
 OR LITHIUM OR SODIUM OR POTASSIUM)(3A) HYDROXIDE OR ?AMINE(5A)
 HYDRATE
 L25 565021 SEA ABB=ON PLU=ON L20 OR HALIDE OR BROMIDE ALKALI(W) METAL?

FILE 'REGISTRY' ENTERED AT 12:00:18 ON 22 AUG 2005

L26 243271 SEA ABB=ON PLU=ON COPPER?/CN
 L27 170458 SEA ABB=ON PLU=ON TITANIUM

FILE 'HCAPLUS' ENTERED AT 12:01:52 ON 22 AUG 2005

L28 25 SEA ABB=ON PLU=ON L15 AND L23 AND L24 AND L25
 L29 24 SEA ABB=ON PLU=ON L28 AND PD=<OCTOBER 14, 2003

FILE 'HCAPLUS' ENTERED AT 12:05:46 ON 22 AUG 2005

D STAT QUE

Sackey 10_687411-History

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      D IBIB ABS HITSTR L29 1-24
L30   38 SEA ABB=ON  PLU=ON  L13 AND L14 AND L23 AND L22 AND L24 AND
      L25
L31   18 SEA ABB=ON  PLU=ON  L30 NOT L29
L32   5  SEA ABB=ON  PLU=ON  L31 AND (L26 OR L27 OR CO(W)CATALY?)
L33   5  SEA ABB=ON  PLU=ON  (L32 OR L28) NOT L29
      D STAT QUE
      D IBIB ABS HITSTR L33 1-5
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FILE HOME

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 19 AUG 2005 HIGHEST RN 861198-35-8

DICTIONARY FILE UPDATES: 19 AUG 2005 HIGHEST RN 861198-35-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

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*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005. A new display format, IDERL, is now     *
* available and contains the CA role and document type information. *
*
*****
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

FILE HCAPLUS

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FILE COVERS 1907 - 22 Aug 2005 VOL 143 ISS 9

FILE LAST UPDATED: 21 Aug 2005 (20050821/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details..

Sackey 10_687411-History

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 12:05:46 ON 22 AUG 2005

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FILE COVERS 1907 - 22 Aug 2005 VOL 143 ISS 9

FILE LAST UPDATED: 21 Aug 2005 (20050821/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

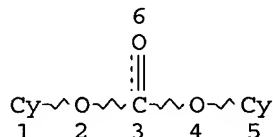
This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> d stat que

L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L2 6856 SEA FILE=REGISTRY SSS FUL L1

L3 125595 SEA FILE=REGISTRY ABB=ON PLU=ON ACTIVATING(W) SOLVENT OR
ETHER? OR SULFONE? OR NITRILES OR AMIDES OR CARBONATE? OR
POLYETHER? OR DIGLYME OR TRIGLYME OR TETRAGLYME

L4 1255 SEA FILE=REGISTRY ABB=ON PLU=ON SOLVENT OR SOLVENTS

L5 95 SEA FILE=REGISTRY ABB=ON PLU=ON NITRILE?/CN

L6 786 SEA FILE=REGISTRY ABB=ON PLU=ON AMIDE?/CN

L7 16418 SEA FILE=REGISTRY ABB=ON PLU=ON PHENOLIC OR CRESOL OR
4-FLUOROPHENOL?/CN OR BISPHENOL A?/CN OR METHYL SALICYLATE?/CN

L8 1 SEA FILE=REGISTRY ABB=ON PLU=ON PHENOL/CN

L9 24018 SEA FILE=HCAPLUS ABB=ON PLU=ON L2 OR DIARYL(W) CARBONATE

L10 2183760 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR L4 OR L5 OR L6 OR
ACTIVATING(W) SOLVENT OR ETHER? OR SULFONE? OR NITRILE OR AMIDE
OR CARBONATE? OR POLYETHER? OR DIGLYME OR TRIGLYME OR

TETRAGLYME

L11 570160 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 OR L8 OR PHENOLIC OR
CRESOL OR 4 (W) FLUOROPHENOL? OR BISPHENOL (W) A OR METHYL (W)
SALICYLATE? OR PHENOL

L12 5461 SEA FILE=HCAPLUS ABB=ON PLU=ON L9 (L) PREPARATION/RL

~~L13 335274 SEA FILE=HCAPLUS ABB=ON PLU=ON REACTANT/RL (L) L10~~

L14 65329 SEA FILE=HCAPLUS ABB=ON PLU=ON REACTANT/RL (L) L11

L15 677 SEA FILE=HCAPLUS ABB=ON PLU=ON L12 AND L13 AND L14

L17 19213 SEA FILE=REGISTRY ABB=ON PLU=ON CARBON MONOXIDE?/CN OR
OXYGEN

L19 17811 SEA FILE=REGISTRY ABB=ON PLU=ON (TETRAMETHYLAMMONIUM OR
TETRAMETHYL (L) AMMONIUM OR PHOSPHONIUM OR AMMONIUM OR LITHIUM
OR SODIUM OR POTASSIUM) (L) HYDROXIDE OR (AMINE OR TRIETHYLAMIN
E OR TRIALKYLAMINE) (L) HYDRATE

L20 165455 SEA FILE=REGISTRY ABB=ON PLU=ON HALIDE OR BROMIDE OR
(LITHIUM OR MAGNESIUM) (L) BROMIDE OR (AMMONIUM OR PHOSPHONIUM) (W
) HALIDE OR ALKALI METAL?/CN

L23 1846505 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 OR CARBON (W) MONOXIDE OR
CO OR OXYGEN OR O2

L24 904208 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 OR BASE OR (PHOSPHONIUM
OR ?AMMONIUM OR LITHIUM OR SODIUM OR POTASSIUM) (3A) HYDROXIDE
OR ?AMINE (5A) HYDRATE

L25 565021 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 OR HALIDE OR BROMIDE
ALKALI (W) METAL?

L28 25 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L23 AND L24 AND L25

L29 24 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 AND PD=<OCTOBER 14, 2003

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=> d ibib abs hitstr l29 1-24

L29 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:154410 HCAPLUS

DOCUMENT NUMBER: 138:187781

TITLE: Preparation of 3-phenoxy-4-pyridazinol derivatives as
herbicidesINVENTOR(S): Tsukamoto, Yoshihisa; Komai, Hiroyuki; Kadotani,
Junji; Koi, Kiyoshi; Mio, Shigeru; Takeshiba, Hideo

PATENT ASSIGNEE(S): Sankyo Company, Limited, Japan

SOURCE: PCT Int. Appl., 560 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003016286	A1	20030227	WO 2002-JP8278	20020814 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,			

CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

CA 2457575	AA	20030227	CA 2002-2457575	20020814 <--
JP 2004002263	A2	20040108	JP 2002-236164	20020814
EP 1426365	A1	20040609	EP 2002-760636	20020814

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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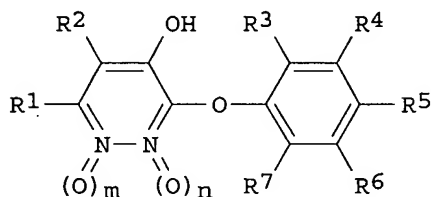
CN 1543455	A	20041103	CN 2002-816090	20020814
ZA 2004001572	A	20050311	ZA 2004-1572	20040226
US 2005037925	A1	20050217	US 2004-487013	20040227

PRIORITY APPLN. INFO.:

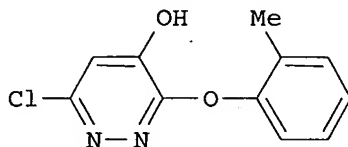
JP 2001-248014	A	20010817
JP 2002-82219	A	20020325
WO 2002-JP8278	W	20020814

OTHER SOURCE(S): MARPAT 138:187781

GI



I



II

AB The title compds. I [wherein R¹ = H, halo, halo(alkyl), cycloalkyl, alkenyl, CN, alkyl-CO, dialkylcarbamoyl, alkoxy, (un)substituted Ph, 5-6 membered heterocyclyl(oxy), or PhO; R² = H, halo, (alkoxy)alkyl, alkoxy-CO, trialkylsilyl, (un)substituted PhCO, PhO, or PhS; R³-R⁷ = independently H, halo, alkynyl, bicycloalkyl, CN, CHO, alkyl-CO, CO₂H, alkoxy-CO, (dialkyl)carbamoyl, NO₂, OH, (halo)alkoxy, alkoxyalkoxy, alkylthio, alkyl-SO, alkyl-SO₂, trialkylsilyl, (un)substituted alkyl, alkenyl, cycloalkyl, PhCO, Ph, 3-6 membered heterocyclyl, amino, PhO, 5-6 membered heterocycliloxy, or PhSO₃; or R³-R⁷ = neighboring two of them form (un)substituted 3-6 membered cyclohydrocarbyl with the carbon atoms attached; m and n = independently 0 or 1] and salts or ester derivs. thereof are prepared. For example, 3,6-dichloropyridazine was coupled with 2-methylphenol in the presence of K₂CO₃ to give 6-chloro-3-(2-methylphenoxy)pyridazine (57%). The pyridazine obtained was treated with POCl₃ and Cl₂ to produce 4,6-dichloro-3-(2-methylphenoxy)pyridazine (42%). The above compound was hydrolyzed by aqueous NaOH in 1,4-dioxane in the presence of Bu₄NCl to afford 6-chloro-3-(2-methylphenoxy)-4-pyridazinol (II) (37%). I showed herbicidal activity, and are useful as herbicides. Formulations containing I as an active ingredient were also described.

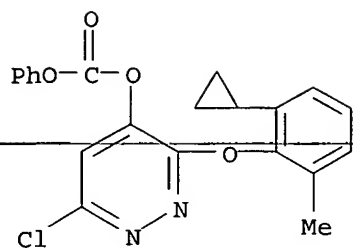
IT 499229-28-6P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); **PREP** (Preparation); USES (Uses)

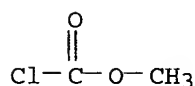
(herbicide; preparation of phenoxy-pyridazinol derivs. as herbicides)

RN 499229-28-6 HCAPLUS

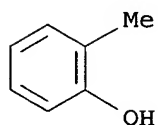
CN Carbonic acid, 6-chloro-3-(2-cyclopropyl-6-methylphenoxy)-4-pyridazinyl phenyl ester (9CI) (CA INDEX NAME)



IT 79-22-1, Methyl chlorocarbonate 95-48-7, 2-Methylphenol, reactions 100-39-0, Benzyl bromide 106-96-7, Propargyl bromide 107-30-2, Chloromethoxymethane 108-24-7, Acetic anhydride 135-02-4, 2-Methoxybenzaldehyde 150-19-6, 3-Methoxyphenol 506-68-3, Bromocyanide 920-39-8, Isopropylmagnesium bromide 1195-09-1, 2-Methoxy-5-methylphenol 1310-73-2, Sodium hydroxide, reactions 1779-49-3, Methyltriphenylphosphonium bromide 2219-82-1, 2-tert-Butyl-6-methylphenol 3970-21-6, 2-Methoxyethoxymethyl chloride 7789-59-5, Phosphoric tribromide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of phenoxy pyridazinol derivs. as herbicides)
 RN 79-22-1 HCAPLUS
 CN Carbonochloridic acid, methyl ester (9CI) (CA INDEX NAME)



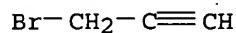
RN 95-48-7 HCAPLUS
 CN Phenol, 2-methyl- (9CI) (CA INDEX NAME)



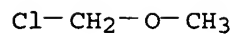
RN 100-39-0 HCAPLUS
 CN Benzene, (bromomethyl)- (9CI) (CA INDEX NAME)



RN 106-96-7 HCAPLUS
 CN 1-Propyne, 3-bromo- (9CI) (CA INDEX NAME)

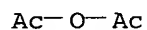


RN 107-30-2 HCAPLUS
 CN Methane, chloromethoxy- (9CI) (CA INDEX NAME)



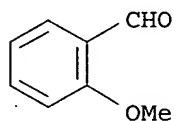
RN 108-24-7 HCAPLUS

CN Acetic acid, anhydride (9CI) (CA INDEX NAME)



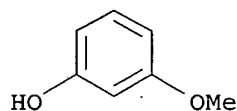
RN 135-02-4 HCAPLUS

CN Benzaldehyde, 2-methoxy- (9CI) (CA INDEX NAME)



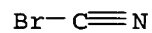
RN 150-19-6 HCAPLUS

CN Phenol, 3-methoxy- (9CI) (CA INDEX NAME)



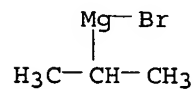
RN 506-68-3 HCAPLUS

CN Cyanogen bromide ((CN)Br) (9CI) (CA INDEX NAME)



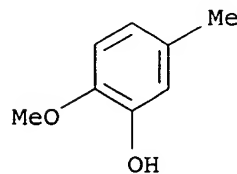
RN 920-39-8 HCAPLUS

CN Magnesium, bromo(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 1195-09-1 HCAPLUS

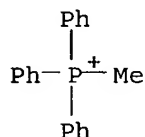
CN Phenol, 2-methoxy-5-methyl- (9CI) (CA INDEX NAME)



RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

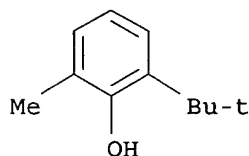
Na-OH

RN 1779-49-3 HCAPLUS
CN Phosphonium, methyltriphenyl-, bromide (8CI, 9CI) (CA INDEX NAME)

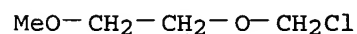


● Br⁻

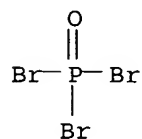
RN 2219-82-1 HCAPLUS
CN Phenol, 2-(1,1-dimethylethyl)-6-methyl- (9CI) (CA INDEX NAME)



RN 3970-21-6 HCAPLUS
CN Ethane, 1-(chloromethoxy)-2-methoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7789-59-5 HCAPLUS
CN Phosphoric tribromide (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:77802 HCAPLUS
DOCUMENT NUMBER: 138:124222
TITLE: Process and catalyst systems for the carbonylation manufacture of diaryl carbonates from phenols and

INVENTOR(S): carbon monoxide and dioxide
 Reisinger, Claus-Peter; Hansen, Sven Michael; Fischer,
 Peter
 PATENT ASSIGNEE(S): Bayer A.-G., Germany; Bayer Materialscience A.-G.
 SOURCE: Eur. Pat. Appl., 9 pp.
 CODEN: EPXXDW

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1279659	A2	20030129	EP 2002-15584	20020715 <--
EP 1279659	A3	20040303		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
DE 10136856	A1	20030213	DE 2001-10136856	20010727 <--
SG 103877	A1	20040526	SG 2002-4323	20020712
JP 2003096027	A2	20030403	JP 2002-211168	20020719 <--
US 2003036663	A1	20030220	US 2002-200667	20020722 <--
US 6852872	B2	20050208		
BR 2002002955	A	20030603	BR 2002-2955	20020725 <--
CN 1400204	A	20030305	CN 2002-127060	20020726 <--
PRIORITY APPLN. INFO.:			DE 2001-10136856	A 20010727

OTHER SOURCE(S): MARPAT 138:124222

AB A process and for the carbonylation manufacture of diaryl carbonates (e.g., di-Ph carbonate) from phenols (e.g., phenol) and **carbon monoxide** and dioxide is conducted in the presence of a catalyst system comprising a Group VIIIB metal salt (e.g., palladium dibromide) where there are at least two metal salts (e.g., manganese trisacetylacetonate) and a **base** (e.g., tetrabutylammonium bromide).

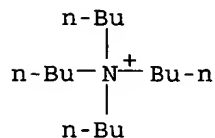
IT 1643-19-2, Tetrabutylammonium bromide 13444-94-5,
 Palladium dibromide

RL: CAT (Catalyst use); USES (Uses)

(catalysts for the carbonylation manufacture of diaryl carbonates from phenols and **carbon monoxide** and dioxide)

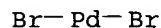
RN 1643-19-2 HCAPLUS

CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



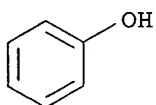
RN 13444-94-5 HCAPLUS

CN Palladium bromide (PdBr₂) (7CI, 8CI, 9CI) (CA INDEX NAME)



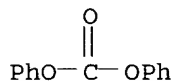
IT 108-95-2, Phenol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (catalysts for the carbonylation manufacture of diaryl carbonates
 from phenols and carbon monoxide and
 dioxide)

~~RN 108-95-2 HCAPLUS~~
 CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT 102-09-0P, Diphenyl carbonate
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (process and catalyst systems for the carbonylation manufacture of
 diaryl carbonates from phenols and carbon
 monoxide and dioxide)

RN 102-09-0 HCAPLUS
 CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 630-08-0, Carbon monoxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (process and catalyst systems for the carbonylation manufacture of diaryl
 carbonates from phenols and carbon
 monoxide and dioxide)

RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:907214 HCAPLUS
 DOCUMENT NUMBER: 137:386324
 TITLE: Method and catalysts for producing aromatic carbonate
 esters from phenols and carbon
 monoxide
 INVENTOR(S): Pressman, Eric James; Ofori, John Yaw
 PATENT ASSIGNEE(S): General Electric Company, USA
 SOURCE: U.S. Pat. Appl. Publ., 16 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2002177724	A1	20021128	US 2001-822531	20010330 <--
US 6800779	B2	20041005		

PRIORITY APPLN. INFO.:

US 2001-822531 20010330

AB A method for economically producing aromatic carbonates (e.g., di-Ph carbonate) from aromatic hydroxy compds. (e.g., phenol) is described which in one embodiment comprises the steps of: (i) contacting, at a temperature sufficient to keep the mixture molten, at least one aromatic hydroxy compound with a catalyst composition comprising the following and any reaction products thereof: (A) at least one Group VIII metal or a compound; (B) at least one salt; (C) at least one metal co-catalyst; and (D) optionally, at least one activating solvent; (ii) optionally heating the mixture at atmospheric

pressure to a temperature above that sufficient to keep the mixture molten; (iii)

pressurizing the mixture with carbon monoxide; (iv) optionally heating the mixture under pressure of carbon monoxide to a temperature above that sufficient to keep the mixture molten; (v) optionally maintaining the mixture under pressure of carbon monoxide for a time period; (vi) introducing oxygen to the mixture to a desired concentration of oxygen in carbon monoxide; (vii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide; (viii) optionally maintaining gas flow for a time period at less than a desired ultimate temperature for the mixture; and (ix) optionally heating the mixture to a desired ultimate temperature under flow of gases.

IT 1310-73-2, Sodium hydroxide, uses

RL: CAT (Catalyst use); USES (Uses)

(base; catalysts for producing aromatic carbonate esters from phenols and carbon monoxide)

RN 1310-73-2 HCAPLUS

CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na-OH

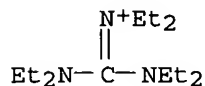
IT 89610-32-2, Hexaethylguanidinium bromide

RL: CAT (Catalyst use); USES (Uses)

(catalyst for producing aromatic carbonate esters from phenols and carbon monoxide)

RN 89610-32-2 HCAPLUS

CN Ethanaminium, N-[bis(diethylamino)methylene]-N-ethyl-, bromide (9CI) (CA INDEX NAME)

● Br⁻

IT 7647-15-6, Sodium bromide, uses

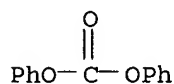
RL: CAT (Catalyst use); USES (Uses)

(catalysts for producing aromatic carbonate esters from phenols and carbon monoxide)

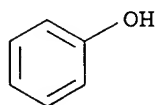
RN 7647-15-6 HCAPLUS
 CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)

Br—Na

IT 102-09-0P, Diphenyl carbonate
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (method and catalysts for producing aromatic carbonate esters from phenols
 and carbon monoxide)
 RN 102-09-0 HCAPLUS
 CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions 630-08-0,
 Carbon monoxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (method and catalysts for producing aromatic carbonate esters
 from phenols and carbon monoxide)
 RN 108-95-2 HCAPLUS
 CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



IT 7782-44-7, Oxygen, reactions
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (method and catalysts for producing aromatic carbonate esters from phenols
 and carbon monoxide using)
 RN 7782-44-7 HCAPLUS
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:900782 HCAPLUS

DOCUMENT NUMBER: 138:4417
 TITLE: Preparation of diaryl carbonates
 INVENTOR(S): Tange, Shinya; Ohashi, Kenji; Nagashima, Ryoichi;
 Yoshizato, Hidenobu
 PATENT ASSIGNEE(S): Teijin Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

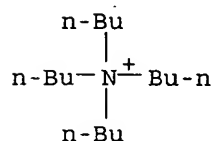
DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002338525	A2	20021127	JP 2001-144324	20010515 <--
PRIORITY APPLN. INFO.:			JP 2001-144324	20010515

OTHER SOURCE(S): MARPAT 138:4417

AB In preparation of R₂CO₃ [R = (un)substituted C₆-15 aryl], useful as materials for aromatic polycarbonates, by oxidative carbonylation of ROH (R = same as above) with CO and O₂ in the presence of catalysts and inert substance (A) while removing H₂O formed during reaction together with (A), (A) is recovered from byproduct (Y) through a process involving (1) ≥1 step to decrease water content and (2) ≥1 step to distill (A). This method increases conversion, selectivity, or yield and the recovered (A) can be reused in the reaction. A mixture containing PhOH, THF, Pd(OAc)₂, Mn(OAc)₂, Bu₄N⁺ Br⁻, and (Bu₄N)₄SiWMo₁₁O₄₀ was bubbled with CO and O₂ at 80° and 0.780 MPa for 5 h to give Ph₂CO₃ containing 0.2% H₂O at selectivity 98.7%. Mixed vapor formed during the reaction was continuously fed to a PhOH trap and mixed vapor passed through the trap was introduced to a condenser to recover CO and O₂ for reuse. The condensate containing 96% THF and 4% H₂O was fed to the bottom of an extraction column, where aqueous NaOH solution was fed from the top at 40° and 0.1 MPa to give THF containing 0.4% H₂O. The recovered THF was distilled using a batch distillation column to obtain THF containing ≤30 ppm H₂O from the bottom.

IT 1643-19-2, Tetrabutylammonium bromide
 RL: CAT (Catalyst use); USES (Uses)
 (catalyst; preparation of diaryl carbonates by oxidative carbonylation of phenols under azeotropic removal of H₂O)
 RN 1643-19-2 HCAPLUS
 CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



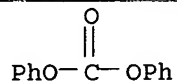
● Br⁻

IT 102-09-0P, Diphenyl carbonate
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
 (preparation of diaryl carbonates by oxidative

carbonylation of phenols under azeotropic removal of H2O)

RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions 630-08-0,

Carbon monoxide, reactions 7782-44-7,

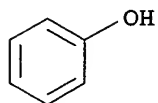
Oxygen, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of diaryl carbonates by oxidative carbonylation of phenols under azeotropic removal of H2O)

RN 108-95-2 HCAPLUS

CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS

CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS

CN Oxygen (8CI, 9CI) (CA INDEX NAME)



IT 1310-73-2, Sodium hydroxide, uses

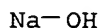
RL: NUU (Other use, unclassified); USES (Uses)

(water removal by extraction with solution of; preparation of diaryl carbonates by

oxidative carbonylation of phenols under azeotropic removal of H2O)

RN 1310-73-2 HCAPLUS

CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)



L29 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:551630 HCAPLUS

DOCUMENT NUMBER: 137:95535

TITLE: Method of sustaining catalyst activity in the oxidative carbonylation catalytic production of

aromatic carbonates
 INVENTOR(S): Pressman, Eric James
 PATENT ASSIGNEE(S): General Electric Company, USA
 SOURCE: U.S., 7 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6423863	B1	20020723	US 2001-681940	20010628 <--
WO 2003002507	A1	20030109	WO 2002-US11797	20020410 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-681940 A 20010628

AB The present invention is directed to a method for sustaining the catalytic activity of a carbonylation catalyst composition, after changes in reactor pressure and temperature, in the catalytic production of aromatic carbonates (e.g.,

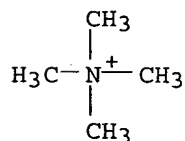
di-Ph carbonate).

IT 75-59-2, Tetramethylammonium hydroxide
 77-98-5, Tetraethylammonium hydroxide
 1310-58-3, Potassium hydroxide, reactions
 1310-65-2, Lithium hydroxide 1310-73-2
 , Sodium hydroxide, reactions 32680-30-1,
 Methyltributylammonium hydroxide

RL: RGT (Reagent); RACT (Reactant or reagent)
 (base; method of sustaining catalyst activity in the
 oxidative carbonylation catalytic production of aromatic carbonates)

RN 75-59-2 HCAPLUS

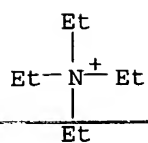
CN Methanaminium, N,N,N-trimethyl-, hydroxide (9CI) (CA INDEX NAME)



● OH⁻

RN 77-98-5 HCAPLUS

CN Ethanaminium, N,N,N-triethyl-, hydroxide (9CI) (CA INDEX NAME)



● OH⁻

RN 1310-58-3 HCAPLUS
CN Potassium hydroxide (K(OH)) (9CI) (CA INDEX NAME)

K-OH

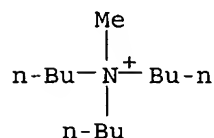
RN 1310-65-2 HCAPLUS
CN Lithium hydroxide (Li(OH)) (9CI) (CA INDEX NAME)

Li-OH

RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

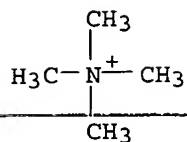
Na-OH

RN 32680-30-1 HCAPLUS
CN 1-Butanaminium, N,N-dibutyl-N-methyl-, hydroxide (9CI) (CA INDEX NAME)



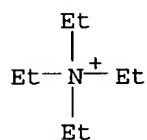
● OH⁻

IT 64-20-0, Tetramethylammonium bromide 71-91-0,
Tetraethylammonium bromide 7550-35-8, Lithium bromide
7647-15-6, Sodium bromide, uses 89610-32-2,
Hexaethylguanidinium bromide
RL: CAT (Catalyst use); USES (Uses)
(method of sustaining catalyst activity in the oxidative carbonylation
catalytic production of aromatic carbonates)
RN 64-20-0 HCAPLUS
CN Methanaminium, N,N,N-trimethyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 71-91-0 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

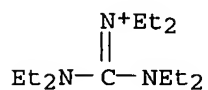
RN 7550-35-8 HCAPLUS
CN Lithium bromide (LiBr) (9CI) (CA INDEX NAME)

Br—Li

RN 7647-15-6 HCAPLUS
CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)

Br—Na

RN 89610-32-2 HCAPLUS
CN Ethanaminium, N-[bis(diethylamino)methylene]-N-ethyl-, bromide (9CI) (CA INDEX NAME)



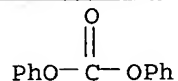
● Br⁻

IT 102-09-0P, Diphenyl carbonate
RL: IMF (Industrial manufacture); PREP (Preparation)
(method of sustaining catalyst activity in the oxidative carbonylation

catalytic production of aromatic carbonates)

RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions 630-08-0,

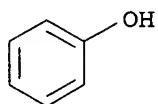
Carbon monoxide, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(method of sustaining catalyst activity in the oxidative carbonylation
catalytic production of aromatic carbonates)

RN 108-95-2 HCAPLUS

CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS

CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:466747 HCAPLUS

DOCUMENT NUMBER: 137:33683

TITLE: An improved process for removing water from oxidative
carbonylation in production of diaryl carbonatesINVENTOR(S): Ofori, John Yaw; Pressman, Eric James; Shalyaev,
Kirill Vladimirovich; Williams, Eric Douglas;
Battista, Richard Anthony

PATENT ASSIGNEE(S): General Electric Company, USA

SOURCE: U.S. Pat. Appl. Publ., 20 pp., Cont.-in-part of U.S.
Ser. No. 736,885.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002077497	A1	20020620	US 2001-961747	20010924 <--
US 6420589	B2	20020716		
WO 2002048088	A2	20020620	WO 2001-US47205	20011113 <--
WO 2002048088	A3	20021219		

WO 2002048088 B1 20030130

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
 HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
 LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT,
 RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,

VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002026018 A5 20020624 AU 2002-26018 20011113 <--
 DE 10197052 T 20031023 DE 2001-10197052 20011113
 JP 2004526678 T2 20040902 JP 2002-549624 20011113
 US 2002111507 A1 20020815 US 2002-121102 20020411 <--
 US 6472551 B2 20021029

PRIORITY APPLN. INFO.:

US 2000-736885 A2 20001214
 US 2001-961747 A 20010924
 WO 2001-US47205 W 20011113

AB The process comprises: (1) contacting at least one aromatic hydroxy compound with **carbon monoxide** and **oxygen** in the presence of a catalyst composition (I), (2) removing a liquid stream (L) from the

reaction vessel, (3) transferring L to a flash vessel to remove the majority of water under reduced pressure, and (4) returning at least a portion of a dried L back to the reaction vessel, wherein at least a portion of diaryl carbonate is recovered from L either before or after water removal and I contains: (A) at least one metal having an atomic number ≥ 44 from Group 8, 9, or 10, (B) at least one alkali metal salt, (C) at least one metal cocatalyst, (D) at least one activating organic solvent, and (E) optionally one **base**.

IT 1310-73-2, **Sodium hydroxide**, uses
 7647-15-6, **Sodium bromide**, uses 13444-94-5, **Palladium bromide**

RL: CAT (Catalyst use); USES (Uses)
 (in production of di-Ph carbonate by oxidative carbonylation)

RN 1310-73-2 HCAPLUS

CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na-OH

RN 7647-15-6 HCAPLUS

CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)

Br-Na

RN 13444-94-5 HCAPLUS

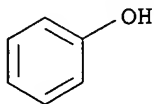
CN Palladium bromide (PdBr₂) (7CI, 8CI, 9CI) (CA INDEX NAME)

Br-Pd-Br

IT 108-95-2, **Phenol**, reactions 630-08-0,
Carbon monoxide, reactions 7782-44-7,
Oxygen, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)

(in production of di-Ph carbonate by oxidative carbonylation)

RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



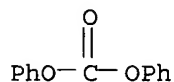
RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)



IT 102-09-0P, Diphenyl carbonate
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(production of di-Ph carbonate by oxidative carbonylation)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:466746 HCAPLUS
DOCUMENT NUMBER: 137:33682
TITLE: A method for production of diaryl carbonates by oxidative carbonylation with removal of undesired water during the reaction
INVENTOR(S): Ofori, John Yaw; Pressman, Eric James; Shalyaev, Kirill Vladimirovich; Williams, Eric Douglas; Battista, Richard Anthony
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp., Cont.-in-part of U.S. Ser. No. 736,751, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2002077496 A1 20020620 US 2001-961745 20010924 <--
 US 6521777 B2 20030218
 WO 2002048087 A2 20020620 WO 2001-US43496 20011114 <--
 WO 2002048087 A3 20030213

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 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
 UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002016685 A5 20020624 AU 2002-16685 20011114 <--
 DE 10197050 T 20040429 DE 2001-10197050 20011114
 JP 2004521094 T2 20040715 JP 2002-549623 20011114

PRIORITY APPLN. INFO.:

US 2000-736751 B2 20001214
 US 2001-961745 A 20010924
 WO 2001-US43496 W 20011114

AB The method comprises: (1) contacting at least one aromatic hydroxy compound with **carbon monoxide** and **oxygen** in the presence of a catalyst composition (I), (2) removing a liquid stream (L) from the

agitating reaction mixture in a vessel, and transferring L to a first disengagement vessel without agitating, (3) transferring L then to a flash vessel to remove the majority of water under reduced pressure, (4) returning at least a portion of a dried L back to the reaction vessel, wherein at least a portion of diaryl carbonate is recovered from L either before or after water removal and I contains: (A) at least one metal having an atomic number ≥ 44 from Group 8, 9, or 10, (B) at least one guanidinium salt or onium salt, (C) at least one metal cocatalyst, and (D) at least one **base**.

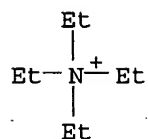
IT 71-91-0, Tetraethylammonium bromide 1310-73-2, Sodium hydroxide, uses 13444-94-5, Palladium bromide

RL: CAT (Catalyst use); USES (Uses)

(in production of di-Ph carbonate by oxidative carbonylation)

RN 71-91-0 HCAPLUS

CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 1310-73-2 HCAPLUS

CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

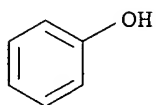
Na-OH

RN 13444-94-5 HCAPLUS

CN Palladium bromide (PdBr₂) (7CI, 8CI, 9CI) (CA INDEX NAME)

Br—Pd—Br

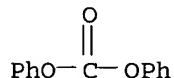
IT 108-95-2, Phenol, reactions 630-08-0,
Carbon monoxide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(in production of di-Ph carbonate by oxidative carbonylation)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



IT 102-09-0P, Diphenyl carbonate
RL: IMF (Industrial manufacture); PREP (Preparation)
(production of di-Ph carbonate by oxidative carbonylation)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:466745 HCAPLUS

DOCUMENT NUMBER: 137:33681

TITLE: A method for removal of undesired water from oxidative carbonylation in production of diaryl carbonates
INVENTOR(S): Ofori, John Yaw; Pressman, Eric James; Shalyaev, Kirill Vladimirovich; Williams, Eric Douglas; Battista, Richard Anthony

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

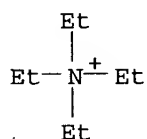
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2002077495 A1 20020620 US 2000-736872 20001214 <--
 PRIORITY APPLN. INFO.: US 2000-736872 20001214
 AB The method comprises: (1) contacting at least one aromatic hydroxy compound
 with **carbon monoxide** and **oxygen** in the
 presence of a catalyst composition (I), (2) removing a liquid stream (L) from
 the

reaction vessel, (3) transferring L to a flash vessel to remove the
 majority of water under reduced pressure, and (4) returning at least a
 portion of a dried L back to the reaction vessel, wherein at least a
 portion of diaryl carbonate is recovered from L either before or after
 water removal and I contains: (A) at least one metal having an atomic number
 ≥ 44 from Group 8, 9, or 10, (B) at least one guanidinium salt or
 onium salt, (C) at least one metal cocatalyst, and (D) at least one
base.

IT 71-91-0, Tetraethylammonium bromide 1310-73-2,
 Sodium hydroxide, uses 13444-94-5, Palladium
 bromide
 RL: CAT (Catalyst use); USES (Uses)
 (in production of di-Ph carbonate by oxidative carbonylation)
 RN 71-91-0 HCAPLUS
 CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

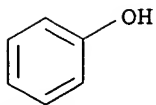
RN 1310-73-2 HCAPLUS
 CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na-OH

RN 13444-94-5 HCAPLUS
 CN Palladium bromide (PdBr₂) (7CI, 8CI, 9CI) (CA INDEX NAME)

Br-Pd-Br

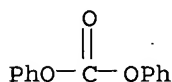
IT 108-95-2, Phenol, reactions 630-08-0,
 Carbon monoxide, reactions.
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in production of di-Ph carbonate by oxidative carbonylation)
 RN 108-95-2 HCAPLUS
 CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



IT 102-09-0P, Diphenyl carbonate
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (production of di-Ph carbonate by oxidative carbonylation)
 RN 102-09-0 HCAPLUS
 CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:428851 HCAPLUS
 DOCUMENT NUMBER: 137:7789
 TITLE: Method and catalyst system for producing aromatic carbonates by carbonylation of aromatic hydroxy compounds
 INVENTOR(S): Shalyaev, Kirill Vladimirovich; Soloveichik, Grigorii Lev; Johnson, Bruce Fletcher
 PATENT ASSIGNEE(S): General Electric Company, USA
 SOURCE: PCT Int. Appl., 24 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002044122	A2	20020606	WO 2001-US50668	20011019 <--
WO 2002044122	A3	20020906		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002099235	A1	20020725	US 2000-728224	20001130 <--
US 6566295	B2	20030520		

AU 2002034135	A5	20020611	AU 2002-34135	20011019 <--
DE 10196977	T	20040422	DE 2001-10196977	20011019
JP 2004535267	T2	20041125	JP 2002-546492	20011019
US 2002183539	A1	20021205	US 2002-151334	20020520 <--
US 6512134	B2	20030128		

PRIORITY APPLN. INFO.: US 2000-728224 A 20001130
WO 2001-US50668 W 20011019

AB The method comprises by reacting ≥ 1 aromatic hydroxy compound (e.g., phenol) with **oxygen** and **carbon monoxide** in the presence of a carbonylation catalyst system containing ≥ 1 Group 8, 9 or 10 metal source (e.g., palladium acetylacetonate), ≥ 1 bromide composition (e.g., sodium bromide), ≥ 1 activating organic solvent (e.g., tetraglyme), a combination of inorg. cocatalysts comprising ≥ 1 titanium source (e.g., titanium oxide acetylacetonate) and ≥ 1 copper source (e.g., copper acetylacetonate) and ≥ 1 **base** (e.g., **sodium hydroxide**) to form an aromatic carbonate (e.g., aromatic carbonate).

IT 1310-73-2, **Sodium hydroxide**, uses

7647-15-6, Sodium bromide, uses

RL: CAT (Catalyst use); USES (Uses)

(method and catalyst system for producing aromatic carbonates by carbonylation of aromatic hydroxy compds.)

RN 1310-73-2 HCAPLUS

CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na-OH

RN 7647-15-6 HCAPLUS

CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)

Br-Na

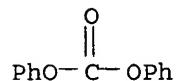
IT 102-09-0P, Diphenyl carbonate

RL: IMF (Industrial manufacture); **PREP (Preparation)**

(method and catalyst system for producing aromatic carbonates by carbonylation of aromatic hydroxy compds.)

RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, **Phenol**, reactions 630-08-0,

Carbon monoxide, reactions 7782-44-7,

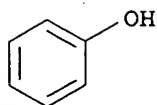
Oxygen, reactions

RL: **RCT (Reactant)**; RACT (Reactant or reagent)

(method and catalyst system for producing aromatic carbonates by carbonylation of aromatic hydroxy compds.)

RN 108-95-2 HCAPLUS

CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:129105 HCAPLUS
DOCUMENT NUMBER: 136:183616
TITLE: Reactivation of catalysts and preparation of aromatic carbonates with the reactivated catalysts
INVENTOR(S): Yoshisato, Akinobu; Muramoto, Masaharu; Ban, Tetsuo
PATENT ASSIGNEE(S): Teijin Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

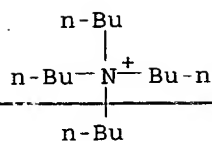
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002053526	A2	20020219	JP 2000-238250	20000807 <--
PRIORITY APPLN. INFO.:			JP 2000-238250	20000807

OTHER SOURCE(S): CASREACT 136:183616

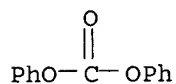
AB Solid catalysts comprising Pt-group metals, their compds., or their complexes supported on carriers, which have been used in preparation of aromatic carbonates by treatment of aromatic hydroxy compds. with CO and O in the presence of quaternary ammonium salts or phosphonium salts and optional bases, are reactivated by treating with the aromatic hydroxy compds. (and their mixts. with organic solvents). Thus, PhOH was treated with Bu₄NBr, Mn(II) acetylacetonate, and Pd supported on perovskite-type La_{0.2}Pb_{0.8}ZrO₃ under CO and O at 80° and 10 bar for 3 h to give 15.8% di-Ph carbonate. The catalyst was recovered, washed with PhOH, and reused to show almost the same activity as the fresh catalyst.

IT 1643-19-2, Tetrabutylammonium bromide
RL: CAT (Catalyst use); USES (Uses)
(reactivation of catalysts in preparation of aromatic carbonates)

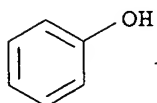
RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



IT 102-09-0P, Diphenyl carbonate
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
 (Preparation)
 (reactivation of catalysts in preparation of aromatic carbonates)
 RN 102-09-0 HCAPLUS
 CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions
 RL: NUU (Other use, unclassified); RCT (Reactant); RACT
 (Reactant or reagent); USES (Uses)
 (reactivation of catalysts in preparation of aromatic carbonates)
 RN 108-95-2 HCAPLUS
 CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT 630-08-0, Carbon monoxide, reactions
 7782-44-7, Oxygen, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactivation of catalysts in preparation of aromatic carbonates)
 RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:111542 HCAPLUS

DOCUMENT NUMBER: 134:149297

TITLE: Carbonylation method and catalyst system for producing
~~aromatic carbonates from hydroxyaromatic compounds,~~
oxygen and carbon monoxideINVENTOR(S): Patel, Ben Purushotam; Soloveichik, Grigorii Lev;
Whisenhunt, Donald Wayne, Jr.; Shalyaev, Kirill
Vladimirovich

PATENT ASSIGNEE(S): General Electric Company, USA

SOURCE: U.S., 7 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6187942	B1	20010213	US 2000-517000	20000301 <--
US 2001031888	A1	20011018	US 2000-729123	20001204 <--
US 6355824	B2	20020312		
WO 2001064617	A1	20010907	WO 2001-US839	20010111 <--
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1263710	A1	20021211	EP 2001-955099	20010111 <--
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2003525262	T2	20030826	JP 2001-563461	20010111 <--
PRIORITY APPLN. INFO.:			US 2000-517000	A3 20000301
			WO 2001-US839	W 20010111

AB Aromatic hydroxy compds. (e.g., phenol) are carbonylated into diaryl carbonates (e.g., di-Ph carbonate) by contacting them with **oxygen** and **carbon monoxide** in the presence of a carbonylation catalyst system comprising an iron compound (e.g., ferrous acetate) as the primary catalyst component, and an inorg. cocatalyst (e.g., tetraethylammonium chloride). This process does not use costly platinum-group metal compound catalysts; a process flow diagram is presented.

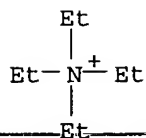
IT 71-91-0, Tetraethylammonium bromide 1310-73-2,
Sodium hydroxide, uses

RL: CAT (Catalyst use); USES (Uses)

(carbonylation cocatalysts for producing aromatic carbonates from hydroxyarom. compds., **oxygen** and **carbon monoxide**)

RN 71-91-0 HCAPLUS

CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)

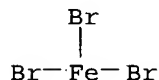


● Br⁻.

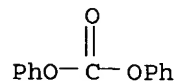
RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na-OH

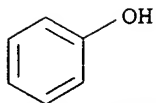
IT 10031-26-2, Ferric bromide
RL: CAT (Catalyst use); USES (Uses)
(carbonylation method and catalyst system for producing aromatic carbonates from hydroxyarom. compds. and oxygen and carbon monoxide)
RN 10031-26-2 HCAPLUS
CN Iron bromide (FeBr₃) (8CI, 9CI) (CA INDEX NAME)



IT 102-09-0P, Diphenyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(carbonylation method and catalyst system for producing aromatic carbonates from hydroxyarom. compds. and oxygen and carbon monoxide)
RN 102-09-0 HCAPLUS
CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions 630-08-0,
Carbon monoxide, reactions 7782-44-7,
Oxygen, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(carbonylation method and catalyst system for producing aromatic carbonates from hydroxyarom. compds. and oxygen and carbon monoxide)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:91544 HCAPLUS

DOCUMENT NUMBER: 134:149285

TITLE: Method and catalyst system for producing aromatic carbonates

INVENTOR(S): Patel, Ben Purushotam; Soloveichik, Grigorii Lev; Whisenhunt, Donald Wayne, Jr.; Shalyaev, Kirill Vladimirovich

PATENT ASSIGNEE(S): General Electric Company, USA

SOURCE: U.S., 7 pp.
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6184409	B1	20010206	US 2000-516746	20000301 <--
US 6509489	B1	20030121	US 2000-694444	20001024 <--
WO 2001064618	A1	20010907	WO 2001-US867	20010111 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1261578	A1	20021204	EP 2001-901979	20010111 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003525263	T2	20030826	JP 2001-563462	20010111 <--
PRIORITY APPLN. INFO.:			US 2000-516746	A3 20000301

WO 2001-US867

W 20010111

AB The method comprises the step of contacting ≥ 1 aromatic hydroxy compound with **oxygen** and CO in the presence of a carbonylation catalyst system having an effective amount of a nickel source as the primary catalyst component and optionally ≥ 1 inorg. co-catalyst, as well as a **halide composition** and/or a **base** in the

absence of a Group VIII B metal source. A process flow diagram is presented.

IT 71-91-0, Tetraethylammonium bromide 1310-73-2,

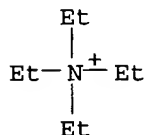
Sodium hydroxide, uses 14126-37-5

RL: CAT (Catalyst use); USES (Uses)

(carbonylation process and catalyst system for producing diaryl carbonates from the reaction of **carbon monoxide** and **oxygen** with hydroxyarom. compds.)

RN 71-91-0 HCAPLUS

CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

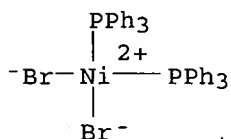
RN 1310-73-2 HCAPLUS

CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na-OH

RN 14126-37-5 HCAPLUS

CN Nickel, dibromobis(triphenylphosphine)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



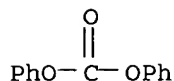
IT 102-09-0P, Diphenyl carbonate

RL: IMF (Industrial manufacture); PREP (Preparation)

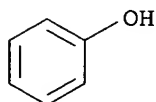
(carbonylation process and catalyst system for producing diaryl carbonates from the reaction of **carbon monoxide** and **oxygen** with hydroxyarom. compds.)

RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions 630-08-0,
Carbon monoxide, reactions 7782-44-7,
Oxygen, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(carbonylation process and catalyst system for producing diaryl
carbonates from the reaction of carbon
monoxide and oxygen with hydroxyarom. compds.)
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



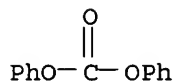
RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:45205 HCAPLUS
DOCUMENT NUMBER: 134:87919
TITLE: Carbonylation process and catalyst system for
producing diaryl carbonates from the reaction of
carbon monoxide and oxygen
with hydroxyaromatic compounds
INVENTOR(S): Patel, Ben Purushotam; Soloveichik, Grigorii Lev;
Whisenhunt, Donald Wayne, Jr.; Shalyaev, Kirill
Vladimirovich
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

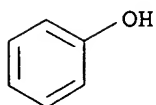
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6175033	B1	20010116	US 2000-510381	20000222 <--
WO 2001062702	A1	20010830	WO 2000-US29285	20001024 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1261576	A1	20021204	EP 2000-973807	20001024 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
US 6380418	B1	20020430	US 2000-721682	20001127 <--
PRIORITY APPLN. INFO.: US 2000-510381 A 20000222				
WO 2000-US29285 W 20001024				
AB	A method of carbonylating aromatic hydroxy compds. into a diaryl carbonate (e.g., di-Ph carbonate) comprises reacting at least one aromatic hydroxy compound (e.g., phenol) with oxygen and carbon monoxide in the presence of a carbonylation catalyst system comprising an effective amount of a manganese source [e.g., manganese(II) acetylacetonate] as a primary catalyst component in the absence of a Group VIIIB metal source, and, optionally in the presence of of a catalytic amount of an inorg. cocatalyst [e.g., lead(II) oxide] as well as a halide composition (e.g., tetraethylammonium bromide), and/or a base . A process flow diagram is presented.			
IT	102-09-0P, Diphenyl carbonate RL: IMF (Industrial manufacture); PREP (Preparation) (carbonylation process and catalyst system for producing diaryl carbonates from the reaction of carbon monoxide and oxygen with hydroxyarom. compds.)			
RN	102-09-0 HCAPLUS			
CN	Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)			



IT 108-95-2, Phenol, reactions 630-08-0,
Carbon monoxide, reactions 7782-44-7,
Oxygen, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(carbonylation process and catalyst system for producing **diaryl carbonates** from the reaction of **carbon monoxide** and **oxygen** with hydroxyarom. compds.)

RN 108-95-2 HCAPLUS

CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS

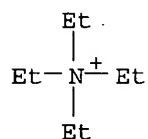
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)



IT 71-91-0, Tetraethylammonium bromide 1310-73-2,
Sodium hydroxide; uses
RL: CAT (Catalyst use); USES (Uses)
(in a carbonylation catalyst system for producing diaryl carbonates
from the reaction of **carbon monoxide** and
oxygen with hydroxyarom. compds.)
RN 71-91-0 HCAPLUS
CN Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)



RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

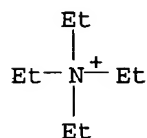
Na⁻OH

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:45204 HCAPLUS
DOCUMENT NUMBER: 134:87918
TITLE: Carbonylation method and catalysts system for
producing diaryl carbonates from the reaction of
carbon monoxide with **oxygen**
and hydroxyaromatic compounds
INVENTOR(S): Patel, Ben Purushotam; Soloveichik, Grigorii Lev;
Whisenhunt, Donald Wayne, Jr.; Shalyaev, Kirill
Vladimirovich
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent

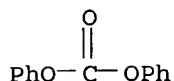
LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6175032	B1	20010116	US 2000-510380	20000222 <--
US 6323358	B1	20011127	US 2000-665605	20000920 <--
WO 2001062703	A1	20010830	WO 2000-US29312	20001024 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1261577	A1	20021204	EP 2000-973814	20001024 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003523987	T2	20030812	JP 2001-561713	20001024 <--
PRIORITY APPLN. INFO.:			US 2000-510380	A3 20000222
			WO 2000-US29312	W 20001024
AB	Diaryl carbonates (e.g., di-Ph carbonate) are prepared by contacting at least one aromatic hydroxy compound (e.g., phenol) with oxygen and carbon monoxide in the presence of a carbonylation catalyst system having an effective amount of a cobalt source [e.g., cobalt(III) acetylacetonate] as a primary catalyst component and, optionally, at least one inorg. cocatalyst [e.g., copper(II) acetylacetonate], as well as a halide composition (e.g., tetraethylammonium bromide) and/or base .			
IT	71-91-0, Tetraethylammonium bromide RL: CAT (Catalyst use); USES (Uses) (carbonylation method and catalysts system for producing diaryl carbonates from the reaction of carbon monoxide with oxygen and hydroxyarom. compds.)			
RN	71-91-0 HCAPLUS			
CN	Ethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)			

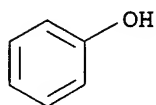


● Br⁻

IT 102-09-0P, Diphenyl carbonate
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (carbonylation method and catalysts system for producing diaryl carbonates from the reaction of carbon monoxide with oxygen and hydroxyarom. compds.)
 RN 102-09-0 HCAPLUS
 CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



~~IT 108-95-2, Phenol, reactions 630-08-0,~~
 Carbon monoxide, reactions 7782-44-7,
 Oxygen, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (carbonylation method and catalysts system for producing diaryl
 carbonates from the reaction of carbon
 monoxide with oxygen and hydroxyarom. compds.)
 RN 108-95-2 HCAPLUS
 CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1997:769987 HCAPLUS
 DOCUMENT NUMBER: 128:23258
 TITLE: Process and catalysts for the preparation of diaryl
 carbonates from hydroxyaromatic compounds and
 carbon monoxide-oxygen gas
 mixtures
 INVENTOR(S): Buysch, Hans-Josef; Hesse, Carsten; Rechner, Johann
 PATENT ASSIGNEE(S): Bayer A.-G., Germany
 SOURCE: Ger. Offen., 9 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19619949	A1	19971120	DE 1996-19619949	19960517 <--

US 5856554	A	19990105	US 1997-853516	19970509 <--
EP 807619	A1	19971119	EP 1997-107407	19970512 <--
EP 807619	B1	20020911		
R: BE, DE, ES, FR, GB, IT, NL				
JP 10045674	A2	19980217	JP 1997-135803	19970512 <--
ES 2181946	T3	20030301	ES 1997-107407	19970512 <--

PRIORITY APPLN. INFO.: DE 1996-19619949 A 19960517

OTHER SOURCE(S): MARPAT 128:23258

AB Diaryl carbonates (e.g., di-Ph carbonate) are prepared in high yield, and without the use of phosgene, by the reaction of (un)substituted C6-12 hydroxyarom. compds. (e.g., PhOH) with an O-CO gas mixture in the presence of a platinum-group catalyst (e.g., palladium bromide), a co-catalyst [e.g., manganese(III) acetylacetonate], a quaternary salt (e.g., Bu₄NBr), and a base (e.g., PhONa) at 30-200°/1-200 bar in the melt phase and, from the beginning of the reaction, the amount of diaryl carbonate in the reaction mass is maintained at ≥20% (i.e., initially by addition of it to the reaction mixture). A process flow diagram is presented.

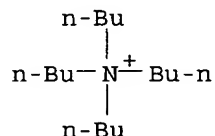
IT 1643-19-2, Tetrabutylammonium bromide 13444-94-5, Palladium bromide

RL: CAT (Catalyst use); USES (Uses)

(process and catalysts for the preparation of diaryl carbonates from hydroxyarom. compds. and carbon monoxide-oxygen gas mixts.)

RN 1643-19-2 HCAPLUS

CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 13444-94-5 HCAPLUS

CN Palladium bromide (PdBr₂) (7CI, 8CI, 9CI) (CA INDEX NAME)

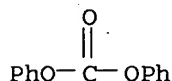
Br-Pd-Br

IT 102-09-0P, Diphenyl carbonate

RL: IMF (Industrial manufacture); PREP (Preparation)
(process and catalysts for the preparation of diaryl carbonates from hydroxyarom. compds. and carbon monoxide-oxygen gas mixts.)

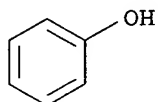
RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions 630-08-0,
 Carbon monoxide, reactions 7782-44-7,
 Oxygen, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (process and catalysts for the preparation of diaryl carbonates
 from hydroxyarom. compds. and carbon monoxide
 oxygen gas mixts.)

RN 108-95-2 HCAPLUS
 CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1997:145244 HCAPLUS
 DOCUMENT NUMBER: 126:144050
 TITLE: Preparation of antibiotic and antitumor DC 107
 derivatives
 INVENTOR(S): Kanda, Yutaka; Saitoh, Yutaka; Saito, Hiromitsu;
 Ashizawa, Tadashi; Sugiyama, Kazuyo; Gomi, Katsushige;
 Kakita, Shingo; Takahashi, Yuichi; Murakata, Chikara
 PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 149 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9700260	A1	19970103	WO 1996-JP1646	19960614 <--
W: AU, CA, CN, HU, JP, KR, NO, NZ, RU, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2197691	AA	19970103	CA 1996-2197691	19960614 <--
AU 9660169	A1	19970115	AU 1996-60169	19960614 <--
AU 705947	B2	19990603		
EP 786462	A1	19970730	EP 1996-917696	19960614 <--
EP 786462	B1	20020918		

R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL,
PT, SE

CN 1163616	A	19971029	CN 1996-190920	19960614 <--
AT 224394	E	20021015	AT 1996-917696	19960614 <--
ES 2183958	T3	20030401	ES 1996-917696	19960614 <--
NO 9700675	A	19970416	NO 1997-675	19970214 <--

NO 309570	B1	20010219		
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US 5733924	A	19980331	US 1997-776938	19970417 <--
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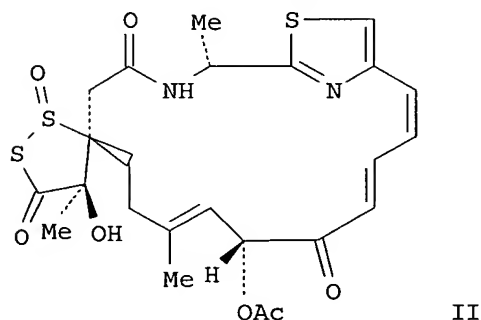
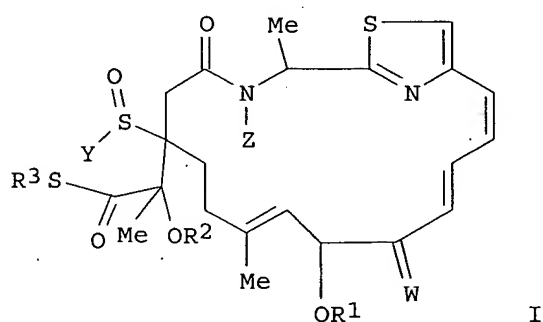
PRIORITY APPLN. INFO.:

JP 1995-150141	A	19950616
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WO 1996-JP1646	W	19960614
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OTHER SOURCE(S): MARPAT 126:144050

GI



AB DC 107 derivs. I [R1 = H, alkoxyalkyl, aralkyloxyalkyl, alkoxyalkoxyalkyl, alkoxyalkoxyalkoxyalkyl, aralkyl, tetrahydropyranyl, COR4, etc.; R2 = H, COR5; R3 = alkyl, alkenyl, (un)substituted aralkyl, etc., R4 = alkyl, etc.; R3 may form a single bond together with Y; Y may form a single bond together with R3 or Z; Z = H or forms a single bond together with Y; W = oxygen, NR6, with provisos] and their pharmaceutically acceptable salts are prepared. Thus, DC 107 in CH2Cl2 containing pyridine, acetic anhydride, and 4-dimethylaminopyridine was stirred for 1.5 h to give the title compound II. This had an IC50 of 0.52 mg/mL against *Staphylococcus aureus*.

IT 186642-77-3P 186643-18-5P 186643-32-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antibiotic and antitumor DC 107 derivs.)

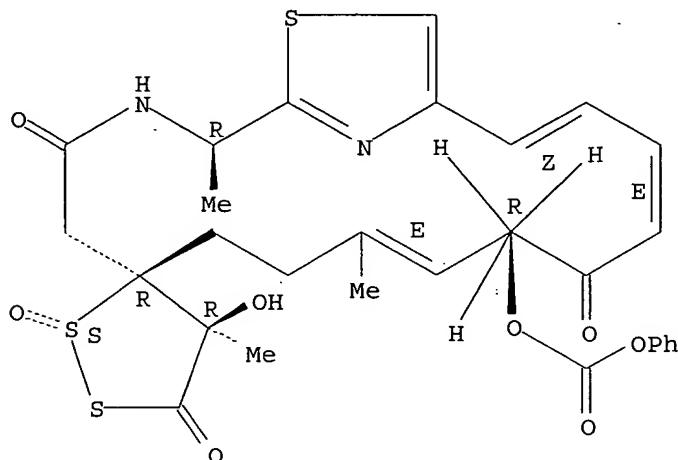
RN 186642-77-3 HCAPLUS

CN Carbonic acid, (2S,2'R,3R,4R,9'E,11'R,13'E,15'Z)-4-hydroxy-2',4,9'-trimethyl-2-oxido-4',5,12'-trioxospiro[1,2-dithiolane-3,6']-

[19]thia[3,20]diazabicyclo[15.2.1]eicosa[1(20),9,13,15,17]pentaen]-11'-yl
phenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.

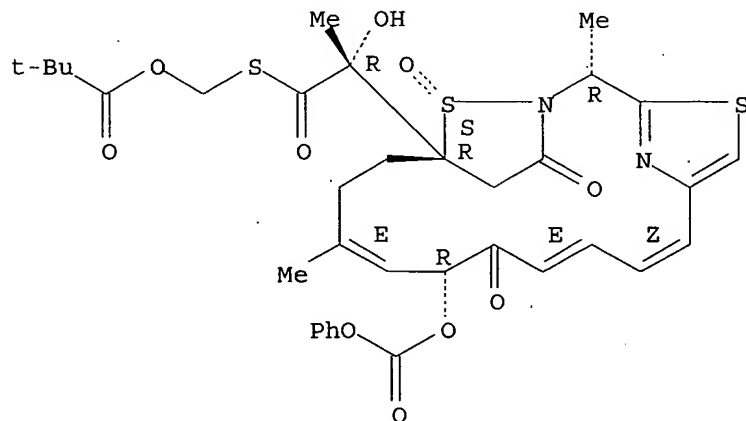


RN 186643-18-5 HCAPLUS

CN Propanoic acid, 2,2-dimethyl-, [[2-[2,14-dimethyl-20-oxido-11,19-dioxo-12-[(phenoxycarbonyl)oxy]-4,20-dithia-1,21-diazatricyclo[15.2.1.13,6]heneicos-3(21),5,7,9,13-pentaen-17-yl]-2-hydroxy-1-oxopropyl]thio]methyl ester, [2R,7Z,9E,12R,13E,17R(R),20S]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.

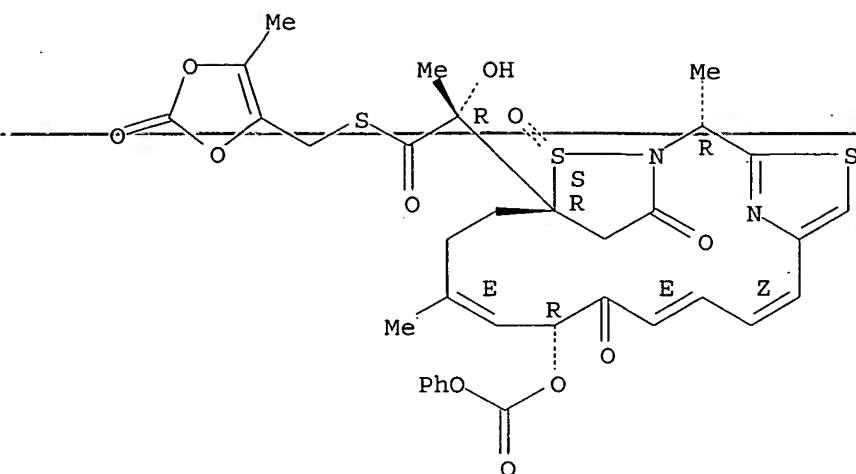


RN 186643-32-3 HCAPLUS

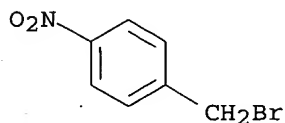
CN 4,20-Dithia-1,21-diazatricyclo[15.2.1.13,6]heneicos-3(21),5,7,9,13-pentaene-17-ethanethioic acid, α -hydroxy- α ,2,14-trimethyl-11,19-dioxo-12-[(phenoxycarbonyl)oxy]-, S-[(5-methyl-2-oxo-1,3-dioxol-4-yl)methyl] ester, 20-oxide, [2R,7Z,9E,12R,13E,17R(R),20S]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

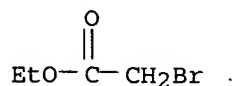
Double bond geometry as described by E or Z.



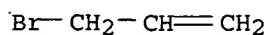
IT 100-11-8, p-Nitrobenzyl bromide 105-36-2, Ethyl
bromoacetate 106-95-6, Allyl bromide, reactions 107-30-2
, Chloromethyl methyl ether 109-92-2 116-11-0
501-53-1, Benzyl chloroformate 541-41-3, Ethyl
chloroformate 543-27-1, Isobutyl chloroformate 931-57-7
, 1-Methoxy-1-cyclohexene 1885-14-9, Phenyl chloroformate
2687-43-6, O-Benzylhydroxylamine hydrochloride 3188-13-4
, Chloromethyl ethyl ether 3587-60-8, Benzyl
chloromethyl ether 3970-21-6 5470-11-1,
Hydroxylamine hydrochloride 28920-43-6, 9-Fluorenyl methyl
chloroformate 39720-27-9, p-Acetoxybenzyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of antibiotic and antitumor DC 107 derivs.)
RN 100-11-8 HCAPLUS
CN Benzene, 1-(bromomethyl)-4-nitro- (9CI) (CA INDEX NAME)



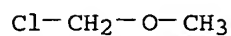
RN 105-36-2 HCAPLUS
CN Acetic acid, bromo-, ethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



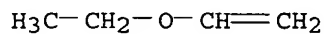
RN 106-95-6 HCAPLUS
CN 1-Propene, 3-bromo- (9CI) (CA INDEX NAME)



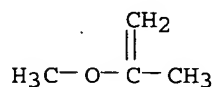
RN 107-30-2 HCAPLUS
CN Methane, chloromethoxy- (9CI) (CA INDEX NAME)



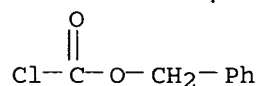
RN 109-92-2 HCAPLUS
CN Ethene, ethoxy- (9CI) (CA INDEX NAME)



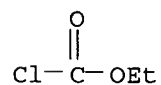
RN 116-11-0 HCAPLUS
CN 1-Propene, 2-methoxy- (9CI) (CA INDEX NAME)



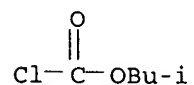
RN 501-53-1 HCAPLUS
CN Carbonochloridic acid, phenylmethyl ester (9CI) (CA INDEX NAME)



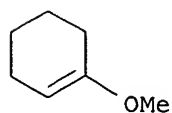
RN 541-41-3 HCAPLUS
CN Carbonochloridic acid, ethyl ester (9CI) (CA INDEX NAME)



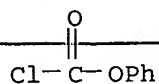
RN 543-27-1 HCAPLUS
CN Carbonochloridic acid, 2-methylpropyl ester (9CI) (CA INDEX NAME)



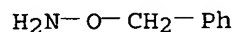
RN 931-57-7 HCAPLUS
CN Cyclohexene, 1-methoxy- (9CI) (CA INDEX NAME)



RN 1885-14-9 HCAPLUS
CN Carbonochloridic acid, phenyl ester (9CI) (CA INDEX NAME)

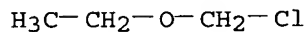


RN 2687-43-6 HCAPLUS
CN Hydroxylamine, O-(phenylmethyl)-, hydrochloride (9CI) (CA INDEX NAME)

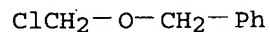


● HCl

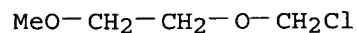
RN 3188-13-4 HCAPLUS
CN Ethane, (chloromethoxy)- (9CI) (CA INDEX NAME)



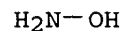
RN 3587-60-8 HCAPLUS
CN Benzene, [(chloromethoxy)methyl]- (9CI) (CA INDEX NAME)



RN 3970-21-6 HCAPLUS
CN Ethane, 1-(chloromethoxy)-2-methoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

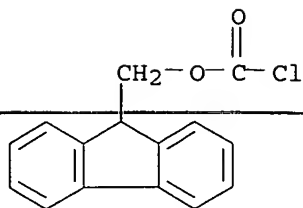


RN 5470-11-1 HCAPLUS
CN Hydroxylamine, hydrochloride (8CI, 9CI) (CA INDEX NAME)

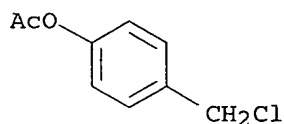


● HCl

RN 28920-43-6 HCAPLUS
CN Carbonochloridic acid, 9H-fluoren-9-ylmethyl ester (9CI) (CA INDEX NAME)



RN 39720-27-9 HCAPLUS
 CN Phenol, 4-(chloromethyl)-, acetate (9CI) (CA INDEX NAME)



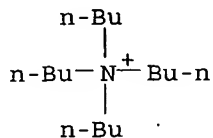
L29 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1997:121321 HCAPLUS
 DOCUMENT NUMBER: 126:131251
 TITLE: Process and catalysts for the continuous preparation
 of diaryl carbonates from hydroxyl group-substituted
 aromatic compounds
 INVENTOR(S): Buysch, Hans-Josef; Hesse, Carsten; Rechner, Johann
 PATENT ASSIGNEE(S): Bayer A.-G., Germany
 SOURCE: Eur. Pat. Appl., 15 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 749955	A1	19961227	EP 1996-109317	19960611 <--
EP 749955	B1	20000816		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
DE 19523390	A1	19970109	DE 1995-19523390	19950623 <--
US 5625091	A	19970429	US 1996-662431	19960610 <--
ES 2151108	T3	20001216	ES 1996-109317	19960611 <--
JP 09012513	A2	19970114	JP 1996-177169	19960619 <--
CA 2179581	AA	19961224	CA 1996-2179581	19960620 <--
CN 1143071	A	19970219	CN 1996-107161	19960621 <--
CN 1119315	B	20030827		

PRIORITY APPLN. INFO.: DE 1995-19523390 A 19950623
 OTHER SOURCE(S): MARPAT 126:131251

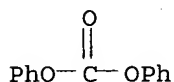
AB The title compds., RO2COR [R = (un)substituted C6-12 aryl] (e.g., di-Ph carbonate), are prepared in a continuous process by the carbonylation of hydroxyl group-substituted aromatic compds. ROH (e.g., PhOH) with CO and O2 in the presence of a Pt-Group metal catalyst (e.g., Pd bromide), a Co catalyst, a quaternary salt (e.g., Bu4NBr), and a base (e.g., PhONa) at 30-200°/1-200 bar, followed by removal of the reaction water under reduced pressure. Process flow diagrams are presented.

IT 1643-19-2, Tetrabutylammonium bromide
 RL: CAT (Catalyst use); USES (Uses)
 (process and catalysts for the continuous preparation of diaryl carbonates
 from hydroxyl group-substituted aromatic compds.)
 RN 1643-19-2 HCAPLUS
 CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)

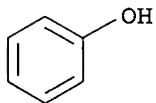


● Br⁻

IT 102-09-0P, Diphenyl carbonate
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
 (Preparation)
 (process and catalysts for the continuous preparation of diaryl
 carbonates from hydroxyl group-substituted aromatic compds.)
 RN 102-09-0 HCAPLUS
 CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions 630-08-0,
 Carbon monoxide, reactions 7782-44-7,
 Oxygen, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (process and catalysts for the continuous preparation of diaryl
 carbonates from hydroxyl group-substituted aromatic compds.)
 RN 108-95-2 HCAPLUS
 CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

L29 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:57544 HCAPLUS

DOCUMENT NUMBER: 126:89872.

TITLE: Synthesis and characterization of aromatic and brominated aromatic polycarbonates by two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate

AUTHOR(S): Liaw, Der-Jang; Chang, Ping

CORPORATE SOURCE: Dep. Chem. Eng., Natl. Taiwan Inst. Technol., Taipei, 106, Taiwan

SOURCE: Journal of Applied Polymer Science (1997), 63(2), 195-204

CODEN: JAPNAB; ISSN: 0021-8995

PUBLISHER: Wiley

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Aromatic and brominated aromatic homo polycarbonates were synthesized by the two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate at 25°C. The IR spectra, inherent viscosity, x-ray diffraction, solubility, contact angle, differential scanning calorimetry, thermogravimetric anal., and limiting oxygen index (LOI) of all polycarbonates were measured. Polycarbonates of moderate or large molar mass with inherent viscosities up to 0.77 dL/g were obtained in high yields with tetrabutylammonium bromide (TBAB) as a catalyst, sodium hydroxide as a base, and 1,2-dichloroethane as solvent. The brominated polycarbonates have good flame retardancy, as indicated by LOI values. The x-ray diffraction diagram showed that all polycarbonates were semicryst. The polycarbonate (PC-2) based on bisphenol S has greater crystallinity than the others because of the sulfonyl group, which has a small van der Waals radius. The incorporation of the bromine atoms (PC-4-PC-6) on the ring decreased the crystallinity. Almost all polymers were soluble in DMF, pyridine, and phenol, but insol. in acetone and m-cresol. Solubility increased remarkably with bromine substitution. The contact angles of polycarbonates (PC-1-PC-3) lie in the of range 82 to 97 degrees greater than that of brominated polycarbonates (PC-4-PC-6). The wettability of the homo polycarbonate based on bisphenol S is greater than that of polycarbonates-derived from bisphenol A and bisphenol AF. Tg of polycarbonates lies in the range 141-206°C, although Tg of polycarbonate based on bisphenol S was not detected Tg of brominated polycarbonates was remarkably greater than that of unbrominated polycarbonates. These polymers obtained from aromatic bisphenols lost no mass below 341°C, but 10% loss of mass was recorded above 396°C in nitrogen.

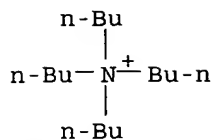
IT 1643-19-2, Tetrabutylammonium bromide 5197-95-5, Benzyltriethylammonium bromide

RL: CAT (Catalyst use); USES (Uses)

(synthesis and characterization of aromatic and brominated aromatic polycarbonates by two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate)

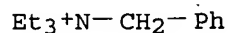
RN 1643-19-2 HCAPLUS

CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



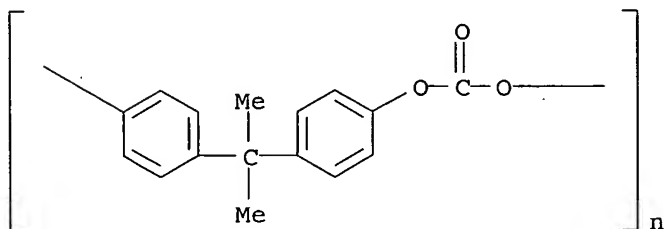
● Br⁻

RN 5197-95-5 HCAPLUS
CN Benzenemethanaminium, N,N,N-triethyl-, bromide (9CI) (CA INDEX NAME)

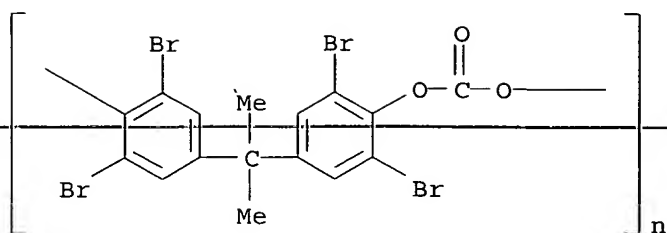


● Br⁻

IT 24936-68-3P, preparation 28774-93-8P,
3,3',5,5'-Tetrabromobisphenol A-trichloromethyl chloroformate copolymer,
sru 28930-33-8P, Bisphenol S-trichloromethyl chloroformate
copolymer, sru 32291-26-2P, Bisphenol AF-trichloromethyl
chloroformate copolymer, sru 56912-08-4P, 3,3',5,5'-
Tetrabromobisphenol S-trichloromethyl chloroformate copolymer, sru
126430-95-3P, 3,3',5,5'-Tetrabromobisphenol AF-trichloromethyl
chloroformate copolymer, sru
RL: PRP (Properties); SPN (Synthetic preparation); **PREP**
(Preparation)
(synthesis and characterization of aromatic and brominated aromatic
polycarbonates by two-phase phase-transfer-catalyzed polycondensation
of bisphenols with trichloromethyl chloroformate)
RN 24936-68-3 HCAPLUS
CN Poly[oxycarbonyloxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene] (9CI)
(CA INDEX NAME)

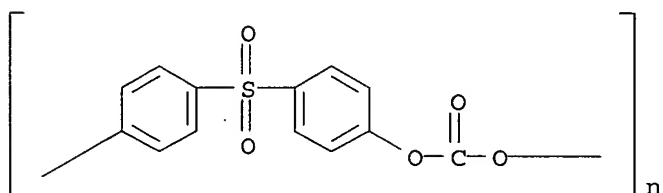


RN 28774-93-8 HCAPLUS
CN Poly[oxycarbonyloxy(2,6-dibromo-1,4-phenylene)(1-methylethylidene)(3,5-dibromo-1,4-phenylene)] (9CI) (CA INDEX NAME)



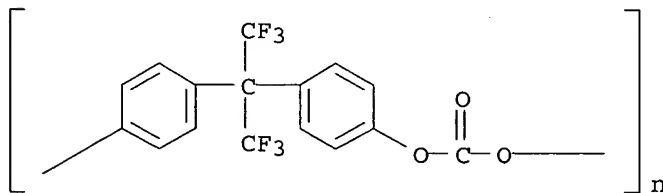
RN 28930-33-8 HCAPLUS

CN Poly(oxycarbonyloxy-1,4-phenylenesulfonyl-1,4-phenylene) (9CI) (CA INDEX NAME)



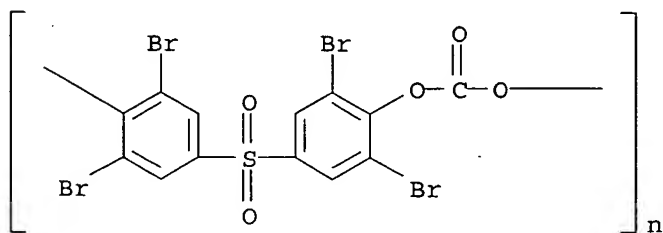
RN 32291-26-2 HCAPLUS

CN Poly[oxycarbonyloxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)



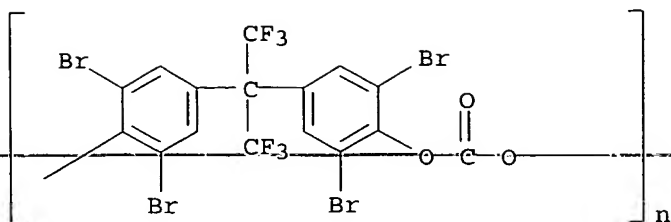
RN 56912-08-4 HCAPLUS

CN Poly[oxycarbonyloxy(2,6-dibromo-1,4-phenylene)sulfonyl(3,5-dibromo-1,4-phenylene)] (9CI) (CA INDEX NAME)



RN 126430-95-3 HCAPLUS

CN Poly[oxycarbonyloxy(2,6-dibromo-1,4-phenylene)[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene](3,5-dibromo-1,4-phenylene)] (9CI) (CA INDEX NAME)



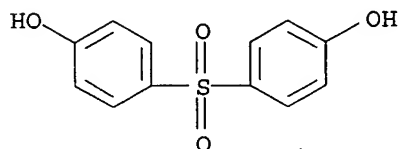
IT 80-09-1 1478-61-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(synthesis and characterization of aromatic and brominated aromatic polycarbonates by two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate)

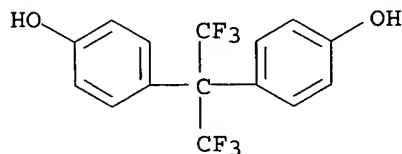
RN 80-09-1 HCAPLUS

CN Phenol, 4,4'-sulfonylbis- (9CI) (CA INDEX NAME)



RN 1478-61-1 HCAPLUS

CN Phenol, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis- (9CI)
(CA INDEX NAME)



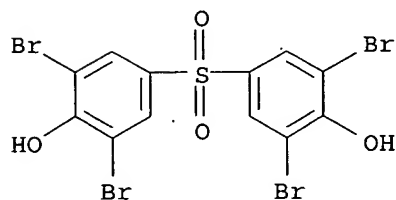
IT 39635-79-5P, 3,3',5,5'-Tetrabromobisphenol S

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(synthesis and characterization of aromatic and brominated aromatic polycarbonates by two-phase phase-transfer-catalyzed polycondensation of bisphenols with trichloromethyl chloroformate)

RN 39635-79-5 HCAPLUS

CN Phenol, 4,4'-sulfonylbis[2,6-dibromo- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

45

THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:674344 HCAPLUS

DOCUMENT NUMBER: 125:300614

TITLE: Process and catalysts for the preparation of diaryl
~~carbonates from aryl alcohols and carbon~~
monoxide and oxygen

INVENTOR(S): Buysch, Hans-Josef; Hesse, Carsten; Rechner, Johann

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 736511	A1	19961009	EP 1996-104710	19960325 <--
EP 736511	B1	19991027		
R: DE, ES, FR, GB, IT, NL				
DE 19512616	A1	19961010	DE 1995-19512616	19950405 <--
ES 2139269	T3	20000201	ES 1996-104710	19960325 <--
JP 08283206	A2	19961029	JP 1996-95861	19960327 <--
US 5663408	A	19970902	US 1996-623728	19960329 <--
PRIORITY APPLN. INFO.:			DE 1995-19512616	A 19950405

OTHER SOURCE(S): MARPAT 125:300614

AB Diaryl carbonates ROCO₂R [R = (un)substituted C₆-12 aryl] (e.g., di-Ph carbonate) are prepared in high yield and selectivity by the reaction of aryl alcs. ROH (e.g., PhOH) with CO and O₂ at 30-200°/2-50 bars in the presence of a quaternary salt (e.g., Bu₄NBr), a base (e.g., PhONa), a Pt-group metal catalyst (e.g., palladium bromide), and a co-catalyst [e.g., activated C and Mn (II) acetylacetonate].

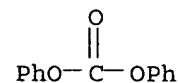
IT 102-09-0P, Diphenyl carbonate

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
 (Preparation)

(process and catalysts for the preparation of diaryl
 carbonates from aryl alcs. and carbon
 monoxide and oxygen)

RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



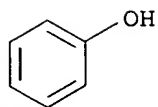
IT 108-95-2, Phenol, reactions 630-08-0,
 Carbon monoxide, reactions 1643-19-2,
 Tetrabutylammonium bromide 7782-44-7, Oxygen,
 reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(process and catalysts for the preparation of diaryl carbonates
 from aryl alcs. and carbon monoxide and
 oxygen)

RN 108-95-2 HCAPLUS

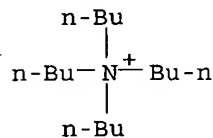
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 1643-19-2 HCAPLUS
 CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



RN 7782-44-7 HCAPLUS
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:774826 HCAPLUS

DOCUMENT NUMBER: 123:169244

TITLE: Process for continuous preparation of diaryl carbonates

INVENTOR(S): Buysch, Hans-Josef; Hesse, Carsten; Rechner, Johann; Schomaecker, Reinhard; Wagner, Paul; Kaufmann, Dieter
 Prof Dipl Chem

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Ger. Offen., 10 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4403075	A1	19950803	DE 1994-4403075	19940202 <--
EP 667336	A1	19950816	EP 1995-100787	19950120 <--
EP 667336	B1	19980520		

R: BE, CH, DE, ES, FR, GB, IT, LI, NL

ES 2117808	T3	19980816	ES 1995-100787	19950120 <--
JP 07247243	A2	19950926	JP 1995-31483	19950127 <--
US 5498742	A	19960312	US 1995-379384	19950127 <--
CA 2141391	AA	19950803	CA 1995-2141391	19950130 <--
CN 1112107	A	19951122	CN 1995-101656	19950130 <--
CN 1056365	B	20000913		

PRIORITY APPLN. INFO.:

DE 1994-4403075

A 19940202

OTHER SOURCE(S):

CASREACT 123:169244; MARPAT 123:169244

AB Improvements are made in the preparation of diaryl carbonates (RO)₂CO [R = (un)substituted C6-12 aryl] by reaction of phenols ROH with CO and O₂ in the presence of a CO-activated noble metal catalyst (group VIIIb), a cocatalyst, a quaternary salt, and a base. In particular, the reaction is conducted with removal of H₂O by stripping of the reaction mixture with excess reaction gas. For example, a run was performed at 80° with 450 g PhOH, with PdBr₂ as catalyst, Mn(II) acetylacetonate as cocatalyst, NaOPh as base, and in the presence of Bu₄N⁺ Br⁻. The reaction gas was a (95:5) mixture of CO and O₂ at 10 bar, introduced at a rate of 400 NL/h. The reaction mixture had a content of 18.6% (PhO)₂CO after 3 h, with removal of 8.75 g PhOH-H₂O mixture as condensate. In contrast, a non-invention run using only 6 NL/h gas mixture gave only 5.4% (PhO)₂CO content in 3 h, with only 0.2 g condensate.

IT 13444-94-5, Palladium dibromide

RL: CAT (Catalyst use); USES (Uses)

(catalyst; continuous preparation of diaryl carbonates)

RN 13444-94-5 HCAPLUS

CN Palladium bromide (PdBr₂) (7CI, 8CI, 9CI) (CA INDEX NAME)

Br—Pd—Br

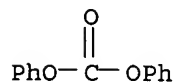
IT 102-09-0P, Diphenyl carbonate

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(continuous preparation of diaryl carbonates)

RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 108-95-2, Phenol, reactions 630-08-0,

Carbon monoxide, reactions 7782-44-7,

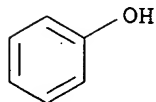
Oxygen, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactant; continuous preparation of diaryl carbonates)

RN 108-95-2 HCAPLUS

CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

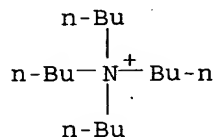


RN 7782-44-7 HCAPLUS
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)



IT 1643-19-2, Tetrabutylammonium bromide
 RL: NUU (Other use, unclassified); USES (Uses)
 (reaction component; continuous preparation of diaryl carbonates)

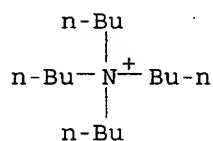
RN 1643-19-2 HCAPLUS
 CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



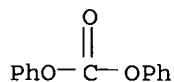
L29 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1993:652566 HCAPLUS
 DOCUMENT NUMBER: 119:252566
 TITLE: Manufacture of aromatic carbonates
 INVENTOR(S): Joyce, Richard P.; King, Joseph A., Jr.; Pressman, Eric J.
 PATENT ASSIGNEE(S): General Electric Co., USA
 SOURCE: U.S., 5 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5231210	A	19930727	US 1992-929749	19920817 <--
EP 583935	A1	19940223	EP 1993-306328	19930811 <--
EP 583935	B1	19961120		
R: DE, ES, FR, GB, IT, NL				
ES 2094485	T3	19970116	ES 1993-306328	19930811 <--
JP 06172268	A2	19940621	JP 1993-202161	19930816 <--
JP 2971297	B2	19991102		
PRIORITY APPLN. INFO.:			US 1992-929749	A 19920817

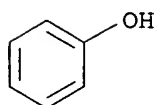
- AB The process comprises heating to a temperature of 60-150° a mixture comprising an aromatic hydroxy compound, CO, O, and an effective amount of a Pd carbonylation catalyst comprising (a) catalytically active Pd in the metallic or chemical bonded state, (b) an inorg. cocatalyst in the form of a complex of a Co²⁺ salt and a Schiff base, (c) a quaternary ammonium or phosphonium halide, and (d) optionally, a terpyridine compound. This catalyst combination substantially enhances the production rate as compared to similar catalysts containing Co²⁺ and Mn³⁺ salts instead of the Co²⁺-Schiff base complex. An stirred autoclave containing a mixture of PhOH 36.41 and (Bu)₄NBr 1.16118 g, and Pd(OAc)₂ 26.8, terpyridine 9.6, and Co di(salicylal)-3,3'-diamino-N-methyldipropylamine (I) 24.6 mg, and (Ph)₂O 5.01 g was flushed with CO at 400 psi, pressurized with O to 110 psi and with CO to 590 psi, and heated at 115° to give Ph₂CO₃ at 0.35 mol/L.h, vs. 0.17 with Co(OAc)₂ instead of I.
- IT 1643-19-2, Tetrabutylammonium bromide
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for carbonylation of phenols with carbon monoxide and oxygen)
- RN 1643-19-2 HCAPLUS
- CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



- IT 102-09-0P, Diphenyl carbonate
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (manufacture of, catalysts for)
- RN 102-09-0 HCAPLUS
- CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



- IT 108-95-2, Phenol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with carbon monoxide and oxygen in manufacture of di-Ph carbonate, catalysts for)
- RN 108-95-2 HCAPLUS
- CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT 7782-44-7, Oxygen, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with phenol and carbon
 monoxide in manufacture of aromatic carbonates, catalysts
 for)
 RN 7782-44-7 HCAPLUS
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

IT 630-08-0, Carbon monoxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with phenols and oxygen in manufacture of
 aromatic carbonates, catalysts for)
 RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

C⁻
 |||
 O⁺

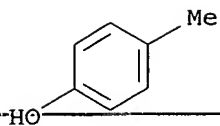
L29 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1993:449073 HCAPLUS
 DOCUMENT NUMBER: 119:49073
 TITLE: Preparation of aromatic carbonates
 INVENTOR(S): Fujita, Terunori; Kiso, Yoshihisa; Nagata, Takuji;
 Iwasaki, Hiroshi
 PATENT ASSIGNEE(S): Mitsui Petrochemical Industries, Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05025095	A2	19930202	JP 1991-203636	19910719 <--
JP 3014812	B2	20000228		

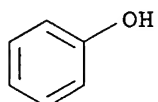
PRIORITY APPLN. INFO.: JP 1991-203636 19910719

AB Aromatic carbonates are prepared by treatment of aromatic hydroxy compds. with CO and mol. O in the presence of catalysts comprising (a) Pd and/or Pd compds., (b) Co compds., (c) organic and/or inorg. halides, and (d) bases under pressure and heating. Autoclaving phenol, Pd(OAc)₂, Co(OPh)₂, CsBr, and Cs₂CO₃ at 100° and CO 49, O 25, and CO₂ 15 kg/cm² for 3 h gave 4.6% di-Ph carbonate in 96% selectivity, vs. 0.3% and 72%, without CsBr, resp.

IT 106-44-5, p-Cresol, reactions 108-95-2,
 Phenol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (carbonylation of, with carbon monoxide and
 oxygen)
 RN 106-44-5 HCAPLUS
 CN Phenol, 4-methyl- (9CI) (CA INDEX NAME)



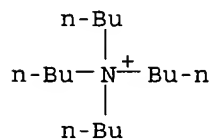
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT 1310-73-2, Sodium hydroxide, uses
1643-19-2, Tetrabutylammonium bromide 7758-02-3,
Potassium bromide, uses 7787-69-1, Cesium bromide
RL: USES (Uses)
(catalyst systems containing, in carbonylation of phenols)
RN 1310-73-2 HCAPLUS
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na⁺ OH⁻

RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 7758-02-3 HCAPLUS
CN Potassium bromide (KBr) (9CI) (CA INDEX NAME)

Br⁻ K⁺

RN 7787-69-1 HCAPLUS
CN Cesium bromide (CsBr) (9CI) (CA INDEX NAME)

Br⁻ Cs⁺

IT 534-17-8, Cesium carbonate 584-08-7, Potassium

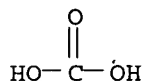
carbonate 584-09-8, Rubidium carbonate

RL: RCT (Reactant); RACT (Reactant or reagent)

(catalyst systems containing, in carbonylation of phenols)

RN 534-17-8 HCAPLUS

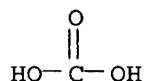
CN Carbonic acid, dicesium salt (8CI, 9CI) (CA INDEX NAME)



●2 Cs

RN 584-08-7 HCAPLUS

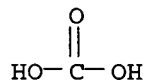
CN Carbonic acid, dipotassium salt (8CI, 9CI) (CA INDEX NAME)



●2 K

RN 584-09-8 HCAPLUS

CN Carbonic acid, dirubidium salt (8CI, 9CI) (CA INDEX NAME)



●2 Rb

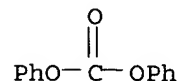
IT 102-09-0P, Diphenyl carbonate

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, from phenol and carbon monoxide and oxygen)

RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



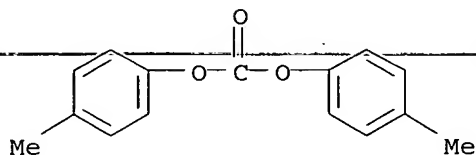
IT 621-02-3P, Bis(p-tolyl) carbonate 33524-49-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, from phenol derivative and carbon monoxide and oxygen)

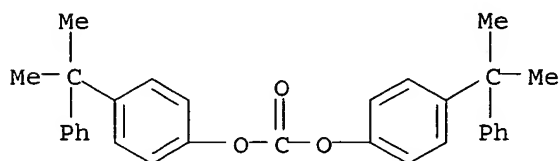
RN 621-02-3 HCAPLUS

CN Carbonic acid, bis(4-methylphenyl) ester (9CI) (CA INDEX NAME)



RN 33524-49-1 HCAPLUS

CN Phenol, 4-(1-methyl-1-phenylethyl)-, carbonate (2:1) (9CI) (CA INDEX NAME)



L29 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1980:604290 HCAPLUS

DOCUMENT NUMBER: 93:204290

TITLE: Aromatic carbonates

INVENTOR(S): Hallgren, John Edward

PATENT ASSIGNEE(S): General Electric Co., USA

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2949936	A1	19800703	DE 1979-2949936	19791212 <--
GB 2038321	A	19800723	GB 1979-39487	19791114 <--
GB 2038321	B2	19830413		
JP 55102539	A2	19800805	JP 1979-160409	19791212 <--
NL 7908991	A	19800617	NL 1979-8991	19791213 <--
FR 2444024	A1	19800711	FR 1979-30668	19791214 <--
CA 1137102	A1	19821207	CA 1979-342001	19791214 <--
			US 1978-969546	A 19781214

PRIORITY APPLN. INFO.:

AB Aromatic carbonates are prepared by treating a phenol with an alkanol and CO in the presence of a Pd catalyst, a Mn redox cocatalyst, a base, and a drying agent. Thus, 4-Me₂CHC₆H₄C₆H₄OH-4 was treated with EtOH and CO in the presence of PdBr₂, Mn(CH₂Ac₂)₂, 1,2,2,6,6-pentamethylpiperidine, and activated Linde 3A mol. sieve to give 4-Me₂CHC₆H₄C₆H₄O₂COEt-4, 4-(4-Me₂CHC₆H₄C₆H₄O)₂CO, and (EtO)₂CO.

IT 13444-94-5

RL: RCT (Reactant); RACT (Reactant or reagent)
(catalyst for reaction of carbon monoxide with phenols and alkanols)

RN 13444-94-5 HCAPLUS

CN Palladium bromide (PdBr₂) (7CI, 8CI, 9CI) (CA INDEX NAME)

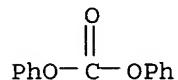
Br-Pd-Br

IT 102-09-0P 75422-89-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

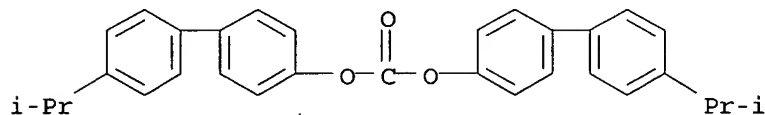
RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 75422-89-8 HCAPLUS

CN [1,1'-Biphenyl]-4-ol, 4'-(1-methylethyl)-, carbonate (2:1) (9CI) (CA INDEX NAME)

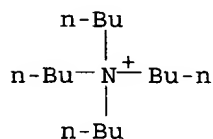


IT 1643-19-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of carbon monoxide with phenols
and alkanols in presence of)

RN 1643-19-2 HCAPLUS

CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



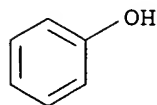
● Br⁻

IT 108-95-2, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methanol and carbon monoxide)

RN 108-95-2 HCAPLUS

CN Phenol (8CI, 9CI) (CA INDEX NAME)



IT 630-08-0, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with phenols and alkanols, aromatic
 carbonates from)
 RN 630-08-0 HCAPLUS
 CN Carbon-monoxide (8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1980:146429 HCAPLUS
 DOCUMENT NUMBER: 92:146429
 TITLE: Catalytic preparation of aromatic carbonates
 PATENT ASSIGNEE(S): General Electric Co., USA
 SOURCE: Fr. Demande, 19 pp. Addn. to Fr. Demande 2,367,731.
 CODEN: FRXXBL
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2422621	A2	19791109	FR 1978-10542	19780410 <--
FR 2422621	B2	19820122		

PRIORITY APPLN. INFO.: FR 1978-10542 A 19780410

AB Aromatic carbonates were prepared by the reaction of phenols with CO, an oxidant and a base in the presence of a catalyst chosen from Ru, Rh, Pd, Os, Ir or Pt or their compds. and optionally with one of a variety of metal compound cocatalysts. Thus, p-PhCMe₂C₆H₄OH treated 44 h with CO in the presence of 1,2,2,6,6-pentamethylpiperidine, PdBr₂ and Mn(ON:CPHCHPhOH)₂ gave 96% conversion of phenol with formation of 95 mol carbonate per mol PdBr₂. With bisphenol A the polycarbonate was formed.

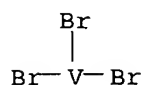
IT 7787-70-4 13446-03-2 13470-26-3
 RL: CAT (Catalyst use); USES (Uses)
 (catalyst, for oxidative reaction of phenols with carbon
 monoxide)
 RN 7787-70-4 HCAPLUS
 CN Copper bromide (CuBr) (8CI, 9CI) (CA INDEX NAME)

Br-Cu

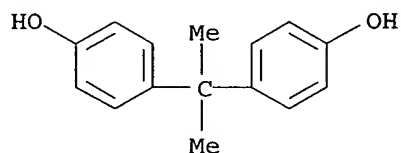
RN 13446-03-2 HCAPLUS
 CN Manganese bromide (MnBr₂) (6CI, 8CI, 9CI) (CA INDEX NAME)

Br-Mn-Br

RN 13470-26-3 HCAPLUS
 CN Vanadium bromide (VBr₃) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



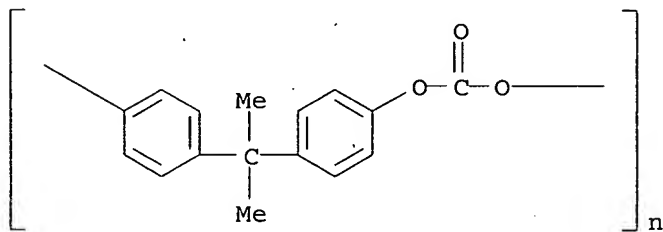
IT 80-05-7, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidative reaction of, with carbon monoxide,
 polycarbonates by)
 RN 80-05-7 HCAPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis- (9CI) (CA INDEX NAME)



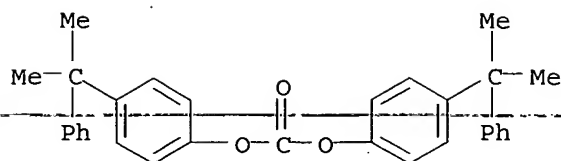
IT 630-08-0, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidative reaction of, with phenols, aromatic
 carbonates by)
 RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



IT 24936-68-3P, preparation 33524-49-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 24936-68-3 HCAPLUS
 CN Poly[oxy carbonyloxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene] (9CI)
 (CA INDEX NAME)



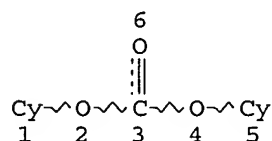
RN 33524-49-1 HCAPLUS
 CN Phenol, 4-(1-methyl-1-phenylethyl)-, carbonate (2:1) (9CI) (CA INDEX NAME)



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NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L2 6856 SEA FILE=REGISTRY SSS FUL L1
 L3 125595 SEA FILE=REGISTRY ABB=ON PLU=ON ACTIVATING(W) SOLVENT OR
 ETHER? OR SULFONE? OR NITRILES OR AMIDES OR CARBONATE? OR
 POLYETHER? OR DIGLYME OR TRIGLYME OR TETRAGLYME
 L4 1255 SEA FILE=REGISTRY ABB=ON PLU=ON SOLVENT OR SOLVENTS
 L5 95 SEA FILE=REGISTRY ABB=ON PLU=ON NITRILE?/CN
 L6 786 SEA FILE=REGISTRY ABB=ON PLU=ON AMIDE?/CN
 L7 16418 SEA FILE=REGISTRY ABB=ON PLU=ON PHENOLIC OR CRESOL OR
 4-FLUOROPHENOL?/CN OR BISPHENOL A?/CN OR METHYL SALICYLATE?/CN
 L8 1 SEA FILE=REGISTRY ABB=ON PLU=ON PHENOL/CN
 L9 24018 SEA FILE=HCAPLUS ABB=ON PLU=ON L2 OR DIARYL(W) CARBONATE
 L10 2183760 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR L4 OR L5 OR L6 OR
 ACTIVATING(W) SOLVENT OR ETHER? OR SULFONE? OR NITRILE OR AMIDE
 OR CARBONATE? OR POLYETHER? OR DIGLYME OR TRIGLYME OR
 TETRAGLYME
 L11 570160 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 OR L8 OR PHENOLIC OR
 CRESOL OR 4(W) FLUOROPHENOL? OR BISPHENOL(W) A OR METHYL(W)
 SALICYLATE? OR PHENOL
 L12 5461 SEA FILE=HCAPLUS ABB=ON PLU=ON L9(L) PREPARATION/RL
 L13 335274 SEA FILE=HCAPLUS ABB=ON PLU=ON REACTANT/RL(L) L10
 L14 65329 SEA FILE=HCAPLUS ABB=ON PLU=ON REACTANT/RL(L) L11
 L15 677 SEA FILE=HCAPLUS ABB=ON PLU=ON L12 AND L13 AND L14
 L16 101866 SEA FILE=REGISTRY ABB=ON PLU=ON PALLADIUM OR ACETYLACETONATE
 L17 19213 SEA FILE=REGISTRY ABB=ON PLU=ON CARBON MONOXIDE?/CN OR
 OXYGEN
 L19 17811 SEA FILE=REGISTRY ABB=ON PLU=ON (TETRAMETHYLAMMONIUM OR
 TETRAMETHYL(L) AMMONIUM OR PHOSPHONIUM OR AMMONIUM OR LITHIUM
 OR SODIUM OR POTASSIUM) (L) HYDROXIDE OR (AMINE OR TRIETHYLAMIN

E OR TRIALKYLAMINE) (L)HYDRATE

L20 165455 SEA FILE=REGISTRY ABB=ON PLU=ON HALIDE OR BROMIDE OR
(LITHIUM OR MAGNESIUM) (L)BROMIDE OR (AMMONIUM OR PHOSPHONIUM) (W)
)HALIDE OR ALKALI METAL?/CN

L22 197938 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 OR PALLADIUM OR ACETYLACET
ONATE

L23 1846505 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 OR CARBON(W) MONOXIDE OR
CO OR OXYGEN OR O2

L24 904208 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 OR BASE OR (PHOSPHONIUM
OR ?AMMONIUM OR LITHIUM OR SODIUM OR POTASSIUM) (3A)HYDROXIDE
OR ?AMINE(5A) HYDRATE

L25 565021 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 OR HALIDE OR BROMIDE
ALKALI (W)METAL?

L26 243271 SEA FILE=REGISTRY ABB=ON PLU=ON COPPER?/CN

L27 170458 SEA FILE=REGISTRY ABB=ON PLU=ON TITANIUM

L28 25 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L23 AND L24 AND L25

L29 24 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 AND PD=<OCTOBER 14, 2003

L30 38 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND L14 AND L23 AND L22
AND L24 AND L25

L31 18 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 NOT L29

L32 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 AND (L26 OR L27 OR
CO(W)CATALY?)

L33 5 SEA FILE=HCAPLUS ABB=ON PLU=ON (L32 OR L28) NOT L29

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L33 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:406839 HCAPLUS
Correction of: 2005:155216
Correction of: 142:197768

TITLE: Product class 1: pyridines
AUTHOR(S): Spitzner, D.
CORPORATE SOURCE: Germany
SOURCE: Science of Synthesis (2005), 15, 11-284
CODEN: SSCYJ9
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review of methods to prepare pyridines, pyridine-1-oxides, and pyridinium
salts. Methods include cyclization, ring transformations, aromatization
and substituent modification.

IT INDEXING IN PROGRESS

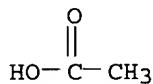
IT 142-71-2 506-68-3, Cyanogen bromide ((CN)Br)
506-96-7, Acetyl bromide 544-92-3, Copper cyanide
(Cu(CN)) 576-83-0 1310-65-2, Lithium
hydroxide (Li(OH)) 1336-21-6, Ammonium
hydroxide ((NH4)(OH)) 1643-19-2 2857-97-8
3375-31-3 5470-11-1 7550-35-8, Lithium bromide
(LiBr) 7550-45-0, Titanium chloride (TiCl4) (T-4)-
7647-10-1, Palladium chloride (PdCl2) 7647-15-6
, Sodium bromide (NaBr) 7699-45-8, Zinc bromide (ZnBr2)
7720-78-7 7727-15-3, Aluminum bromide (AlBr3)
7758-89-6, Copper chloride (CuCl) 7789-47-1, Mercury
bromide (HgBr2) 7789-59-5, Phosphoric tribromide
10028-15-6, Ozone 10035-10-6, Hydrobromic acid
13965-03-2 14221-01-3 26323-01-3

29964-62-3 51364-51-3

RL: CAT (Catalyst use); USES (Uses)

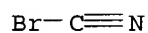
(review of preparation of pyridines, pyridine-1-oxides and pyridinium salts via cyclization, ring transformations, aromatization and substituent modification)

~~RN 142-71-2 HCAPLUS~~
CN Acetic acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)

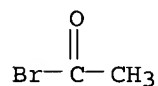


● 1/2 Cu(II)

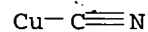
RN 506-68-3 HCAPLUS
CN Cyanogen bromide ((CN)Br) (9CI) (CA INDEX NAME)



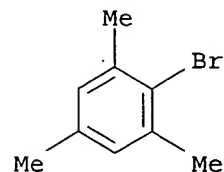
RN 506-96-7 HCAPLUS
CN Acetyl bromide (6CI, 8CI, 9CI) (CA INDEX NAME)



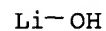
RN 544-92-3 HCAPLUS
CN Copper cyanide (Cu(CN)) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 576-83-0 HCAPLUS
CN Benzene, 2-bromo-1,3,5-trimethyl- (9CI) (CA INDEX NAME)



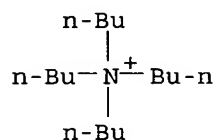
RN 1310-65-2 HCAPLUS
CN Lithium hydroxide (Li(OH)) (9CI) (CA INDEX NAME)



RN 1336-21-6 HCAPLUS
CN Ammonium hydroxide ((NH₄)(OH)) (9CI) (CA INDEX NAME)

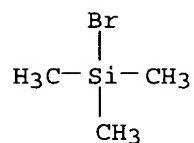
H₄N-OH

RN 1643-19-2 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)

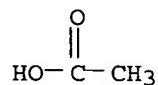


● Br⁻

RN 2857-97-8 HCAPLUS
CN Silane, bromotrimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 3375-31-3 HCAPLUS
CN Acetic acid, palladium(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Pd(II)

RN 5470-11-1 HCAPLUS
CN Hydroxylamine, hydrochloride (8CI, 9CI) (CA INDEX NAME)

H₂N-OH

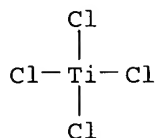
● HCl

RN 7550-35-8 HCAPLUS
CN Lithium bromide (LiBr) (9CI) (CA INDEX NAME)

Br—Li

RN 7550-45-0 HCAPLUS

-----CN Titanium chloride (TiCl₄)--(T-4)--(9CI) (CA INDEX NAME)



RN 7647-10-1 HCAPLUS

CN Palladium chloride (PdCl₂) (6CI, 8CI, 9CI) (CA INDEX NAME)

Cl—Pd—Cl

RN 7647-15-6 HCAPLUS

CN Sodium bromide (NaBr) (9CI) (CA INDEX NAME)

Br—Na

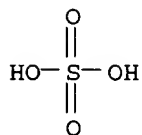
RN 7699-45-8 HCAPLUS

CN Zinc bromide (ZnBr₂) (9CI) (CA INDEX NAME)

Br—Zn—Br

RN 7720-78-7 HCAPLUS

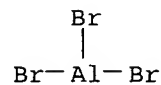
CN Sulfuric acid, iron(2+) salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Fe(II)

RN 7727-15-3 HCAPLUS

CN Aluminum bromide (AlBr₃) (9CI) (CA INDEX NAME)



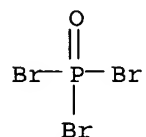
RN 7758-89-6 HCAPLUS
CN Copper chloride (CuCl) (8CI, 9CI) (CA INDEX NAME)

Cl—Cu

RN 7789-47-1 HCAPLUS
CN Mercury bromide (HgBr₂) (8CI, 9CI) (CA INDEX NAME)

Br—Hg—Br

RN 7789-59-5 HCAPLUS
CN Phosphoric tribromide (9CI) (CA INDEX NAME)



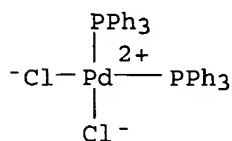
RN 10028-15-6 HCAPLUS
CN Ozone (8CI, 9CI) (CA INDEX NAME)

O—O—O

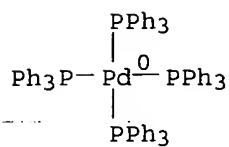
RN 10035-10-6 HCAPLUS
CN Hydrobromic acid (8CI, 9CI) (CA INDEX NAME)

HBr

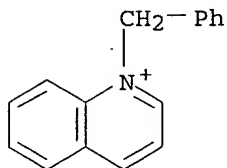
RN 13965-03-2 HCAPLUS
CN Palladium, dichlorobis(triphenylphosphine)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



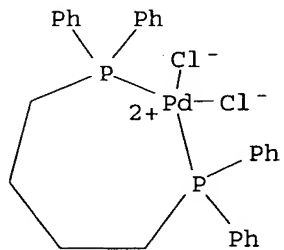
RN 14221-01-3 HCAPLUS
CN Palladium, tetrakis(triphenylphosphine)-, (T-4)- (9CI) (CA INDEX NAME)



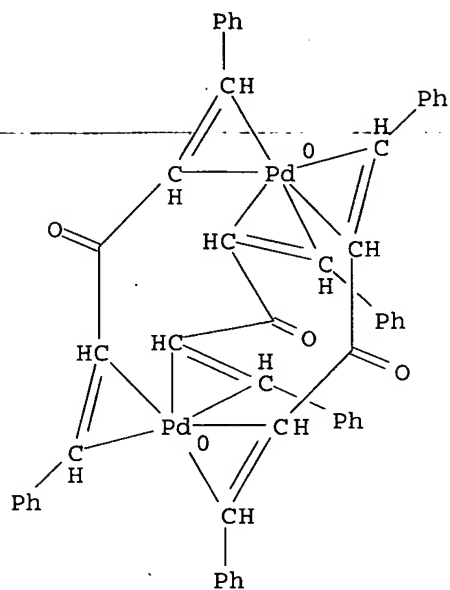
RN 26323-01-3 HCAPLUS
 CN Quinolinium, 1-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)



RN 29964-62-3 HCAPLUS
 CN Palladium, [1,4-butanediylbis[diphenylphosphine-κP]]dichloro-,
 (SP-4-2) - (9CI) (CA INDEX NAME)



RN 51364-51-3 HCAPLUS
 CN Palladium, tris[μ-[(1,2-η:4,5-η)-(1E,4E)-1,5-diphenyl-1,4-pentadien-3-one]]di- (9CI) (CA INDEX NAME)



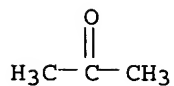
IT 67-64-1, 2-Propanone 75-16-1 100-58-3
 106-96-7 108-24-7 108-95-2, Phenol
 112-71-0 122-51-0 124-63-0, Methanesulfonyl
 chloride 135-02-4 623-00-7 2259-30-5
 13058-25-8 13735-81-4 17015-31-5
 21970-14-9 24424-99-5 34896-80-5
 61049-69-2 62479-73-6 73296-31-8
 171926-14-0 189001-08-9 367906-47-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(review of preparation of pyridines, pyridine-1-oxides and pyridinium salts
 via cyclization, ring transformations, aromatization and substituent
 modification)

RN 67-64-1 HCAPLUS

CN 2-Propanone (9CI) (CA INDEX NAME)



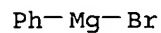
RN 75-16-1 HCAPLUS

CN Magnesium, bromomethyl- (8CI, 9CI) (CA INDEX NAME)



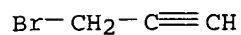
RN 100-58-3 HCAPLUS

CN Magnesium, bromophenyl- (8CI, 9CI) (CA INDEX NAME)



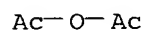
RN 106-96-7 HCAPLUS

CN 1-Propyne, 3-bromo- (9CI) (CA INDEX NAME)



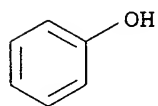
RN 108-24-7 HCAPLUS

CN Acetic acid, anhydride (9CI) (CA INDEX NAME)



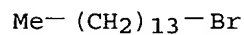
RN 108-95-2 HCAPLUS

CN Phenol (8CI, 9CI) (CA INDEX NAME)



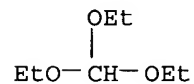
RN 112-71-0 HCAPLUS

CN Tetradecane, 1-bromo- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



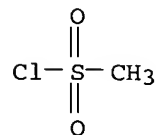
RN 122-51-0 HCAPLUS

CN Ethane, 1,1',1''-[methylidynetris(oxy)]tris- (9CI) (CA INDEX NAME)



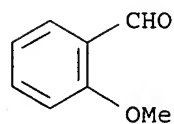
RN 124-63-0 HCAPLUS

CN Methanesulfonyl chloride (6CI, 8CI, 9CI) (CA INDEX NAME)

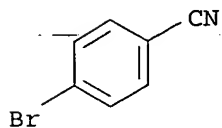


RN 135-02-4 HCAPLUS

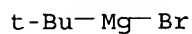
CN Benzaldehyde, 2-methoxy- (9CI) (CA INDEX NAME)



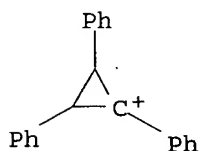
RN 623-00-7 HCAPLUS
CN Benzonitrile, 4-bromo- (9CI) (CA INDEX NAME)



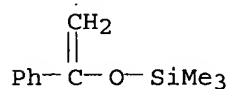
RN 2259-30-5 HCAPLUS
CN Magnesium, bromo(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



RN 13058-25-8 HCAPLUS
CN Cyclopropylum, 1,2,3-triphenyl-, bromide (8CI, 9CI) (CA INDEX NAME)

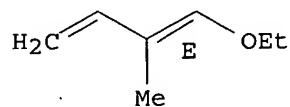


RN 13735-81-4 HCAPLUS
CN Silane, trimethyl[(1-phenylethenyl)oxy]- (9CI) (CA INDEX NAME)

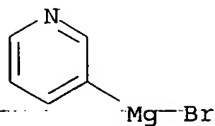


RN 17015-31-5 HCAPLUS
CN 1,3-Butadiene, 1-ethoxy-2-methyl-, (1E)- (9CI) (CA INDEX NAME)

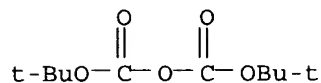
Double bond geometry as shown.



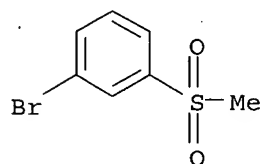
RN 21970-14-9 HCAPLUS
CN Magnesium, bromo-3-pyridinyl- (9CI) (CA INDEX NAME)



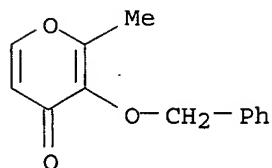
RN 24424-99-5 HCAPLUS
 CN Dicarmonic acid, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



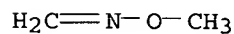
RN 34896-80-5 HCAPLUS
 CN Benzene, 1-bromo-3-(methylsulfonyl)- (9CI) (CA INDEX NAME)



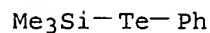
RN 61049-69-2 HCAPLUS
 CN 4H-Pyran-4-one, 2-methyl-3-(phenylmethoxy)- (9CI) (CA INDEX NAME)



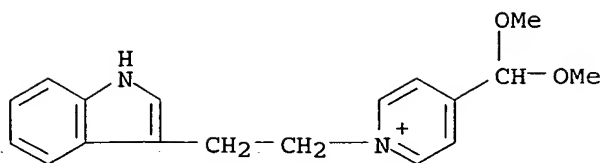
RN 62479-73-6 HCAPLUS
 CN Formaldehyde, O-methyloxime (7CI, 9CI) (CA INDEX NAME)



RN 73296-31-8 HCAPLUS
 CN Silane, trimethyl(phenyltelluro)- (9CI) (CA INDEX NAME)

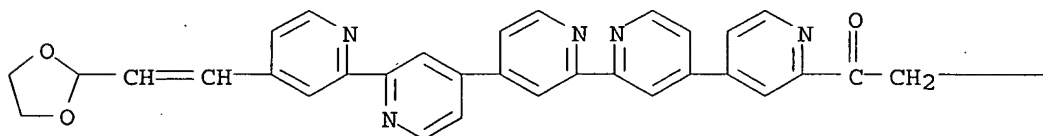


RN 171926-14-0 HCAPLUS
 CN Pyridinium, 4-(dimethoxymethyl)-1-[2-(1H-indol-3-yl)ethyl]-, bromide (9CI)
 (CA INDEX NAME)

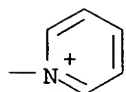


RN 189001-08-9 HCAPLUS
 CN Pyridinium, 1-[2-[4-[2-(1,3-dioxolan-2-yl)ethenyl][2,2':4',4'':2'',2''':4',
 ',4''''-quinquepyridin]-2''''-yl]-2-oxoethyl]-, bromide (9CI) (CA INDEX
 NAME)

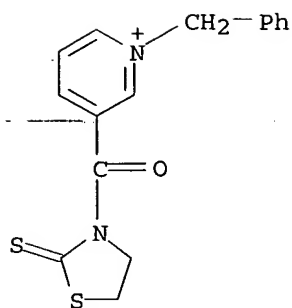
PAGE 1-A



PAGE 1-B

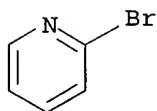


RN 367906-47-6 HCAPLUS
 CN Pyridinium, 1-(phenylmethyl)-3-[(2-thioxo-3-thiazolidinyl)carbonyl]-,
 bromide (9CI) (CA INDEX NAME)

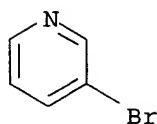


● Br⁻

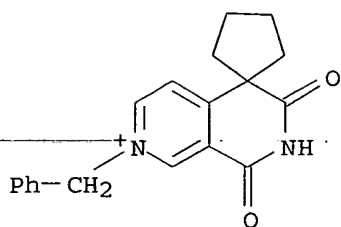
IT 109-04-6P 626-55-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (review of preparation of pyridines, pyridine-1-oxides and pyridinium salts via cyclization, ring transformations, aromatization and substituent modification)
 RN 109-04-6 HCAPLUS
 CN Pyridine, 2-bromo- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 626-55-1 HCAPLUS
 CN Pyridine, 3-bromo- (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 74569-95-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (review of preparation of pyridines, pyridine-1-oxides and pyridinium salts via cyclization, ring transformations, aromatization and substituent modification)
 RN 74569-95-2 HCAPLUS
 CN Spiro[cyclopentane-1,4'-(1'H)-[2,7]naphthyridinium], 2',3'-dihydro-1',3'-dioxo-7'-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)

● Br⁻

L33 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2005:349044 HCAPLUS
 DOCUMENT NUMBER: 142:394138
 TITLE: Water-resistant carbonylation catalyst system for the
 production of diaryl carbonates via the direct
 carbonylation of phenolic compounds
 INVENTOR(S): Soloveichik, Grigorii Lev; Chuck, Timothy Leigh;
 Shalyaev, Kirill Vladimirovich; Pressman, Eric James;
 Bonitatebus, Peter John
 PATENT ASSIGNEE(S): General Electric Company, USA
 SOURCE: U.S. Pat. Appl. Publ., 9 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005085656	A1	20050421	US 2003-687411	20031015
WO 2005040089	A2	20050506	WO 2004-US30610	20040917
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

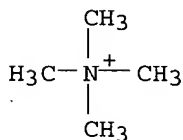
PRIORITY APPLN. INFO.: US 2003-687411 A 20031015

OTHER SOURCE(S): CASREACT 142:394138

AB A method of increasing the amount of diaryl carbonates (e.g., di-Ph carbonate) produced per amount of catalyst consumed in a phenolic compound (e.g., phenol) carbonylation process is described. Phenolic compound carbonylation produces water as a reaction byproduct which reduces the turnover number (TON) of the catalyst. A mixture of a phenolic precursor, a base-containing catalyst and co-catalyst components and at least one chemical additive comprising a halide or hydroxide of alkali metal or alkaline earth metal when carbonylated together under specific conditions increases the TON and water resistivity of a palladium catalyst. The metal halide likely

makes the catalyst less susceptible to degradation by water hence increasing the reaction yield per weight of catalyst consumed.

IT 75-59-2, Tetramethylammonium hydroxide
 1310-58-3, Potassium hydroxide, uses
 1310-65-2, Lithium hydroxide 1310-73-2
 , Sodium hydroxide, uses 7440-05-3,
 Palladium, uses 7440-32-6, Titanium, uses
 7440-50-8, Copper, uses 7550-35-8, Lithium bromide
 7789-48-2, Magnesium bromide 14024-61-4,
 Palladium acetylacetonate 27143-60-8,
 Triethylamine monohydrate
 RL: CAT (Catalyst use); USES (Uses)
 (in a water-resistant carbonylation catalyst system for the production of
 diaryl carbonates via the direct carbonylation of phenolic compds.)
 RN 75-59-2 HCAPLUS
 CN Methanaminium, N,N,N-trimethyl-, hydroxide (9CI) (CA INDEX NAME)



● OH⁻

RN 1310-58-3 HCAPLUS
 CN Potassium hydroxide (K(OH)) (9CI) (CA INDEX NAME)

K-OH

RN 1310-65-2 HCAPLUS
 CN Lithium hydroxide (Li(OH)) (9CI) (CA INDEX NAME)

Li-OH

RN 1310-73-2 HCAPLUS
 CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na-OH

RN 7440-05-3 HCAPLUS
 CN Palladium (8CI, 9CI) (CA INDEX NAME)

Pd

RN 7440-32-6 HCAPLUS
 CN Titanium (8CI, 9CI) (CA INDEX NAME)

Ti

RN 7440-50-8 HCAPLUS
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

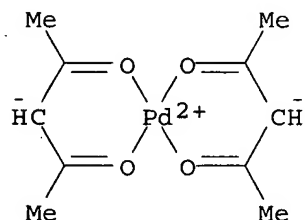
RN 7550-35-8 HCAPLUS
 CN Lithium bromide (LiBr) (9CI) (CA INDEX NAME)

Br-Li

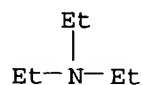
RN 7789-48-2 HCAPLUS
 CN Magnesium bromide (MgBr₂) (9CI) (CA INDEX NAME)

Br-Mg-Br

RN 14024-61-4 HCAPLUS
 CN Palladium, bis(2,4-pentanedionato-κO,κO')-, (SP-4-1) - (9CI)
 (CA INDEX NAME)



RN 27143-60-8 HCAPLUS
 CN Ethanamine, N,N-diethyl-, monohydrate (9CI) (CA INDEX NAME)



● H₂O

IT 630-08-0, Carbon monoxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in a water-resistant carbonylation catalyst system for the production of
 diaryl carbonates via the direct carbonylation of
 phenolic compds.)
 RN 630-08-0 HCAPLUS

CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



IT 7782-44-7, **Oxygen**, reactions

RL: RGT (Reagent); RACT (Reactant or reagent)

(in a water-resistant carbonylation catalyst system for the production of diaryl carbonates via the direct carbonylation of phenolic compds.)

RN 7782-44-7 HCAPLUS

CN Oxygen (8CI, 9CI) (CA INDEX NAME)



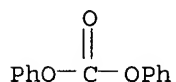
IT 102-09-0P, Diphenyl carbonate

RL: IMF (Industrial manufacture); PREP (Preparation)

(water-resistant carbonylation catalyst system for the production of **diaryl carbonates** via the direct carbonylation of phenolic compds.)

RN 102-09-0 HCAPLUS

CN Carbonic acid, diphenyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 80-05-7, **Bisphenol A**, reactions

95-48-7, o-Cresol, reactions 106-44-5, p-

Cresol, reactions 108-39-4, m-Cresol,

reactions 108-95-2, **Phenol**, reactions 119-36-8

, Methyl salicylate 371-41-5, 4-

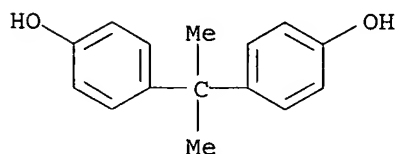
Fluorophenol

RL: RCT (Reactant); RACT (Reactant or reagent)

(water-resistant carbonylation catalyst system for the production of diaryl **carbonates** via the direct carbonylation of **phenolic** compds.)

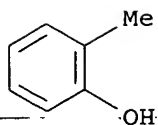
RN 80-05-7 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis- (9CI) (CA INDEX NAME)

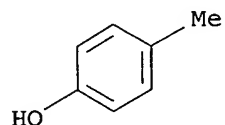


RN 95-48-7 HCAPLUS

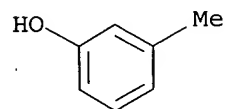
CN Phenol, 2-methyl- (9CI) (CA INDEX NAME)



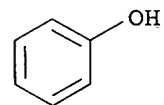
RN 106-44-5 HCAPLUS
CN Phenol, 4-methyl- (9CI) (CA INDEX NAME)



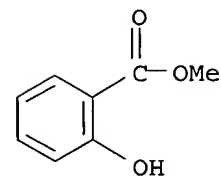
RN 108-39-4 HCAPLUS
CN Phenol, 3-methyl- (9CI) (CA INDEX NAME)



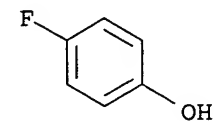
RN 108-95-2 HCAPLUS
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 119-36-8 HCAPLUS
CN Benzoic acid, 2-hydroxy-, methyl ester (9CI) (CA INDEX NAME)



RN 371-41-5 HCAPLUS
CN Phenol, 4-fluoro- (9CI) (CA INDEX NAME)



L33 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:228664 HCAPLUS

DOCUMENT NUMBER: 114:228664

TITLE: Synthesis of cycloprop[c]indol-5-ones from
4-diazo-3-[n-(2-propenyl)amido]cyclohexadien-1-ones.
Exploration of copper(I) and copper(II) complexes as
catalysts

AUTHOR(S): Sundberg, Richard J.; Pitts, William J.

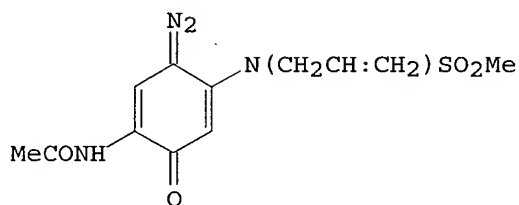
CORPORATE SOURCE: Dep. Chem., Univ. Virginia, Charlottesville, VA,
22901, USASOURCE: Journal of Organic Chemistry (1991), 56(9), 3048-54
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

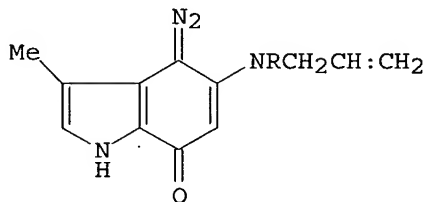
LANGUAGE: English

OTHER SOURCE(S): CASREACT 114:228664

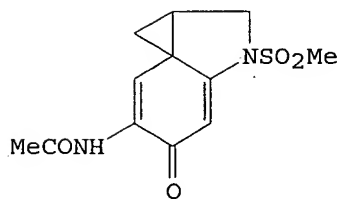
GI



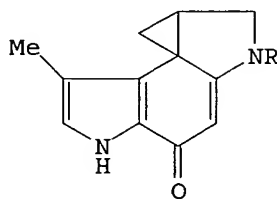
I



II



III



IV

AB The cyclization of diazo(propenylamino)cyclohexadienones (I) and (II; $\text{R} = \text{SO}_2\text{Me}$, COMe) to cyclopropindolones (III) and (IV) under the influence of Cu(I) and Cu(II) compds. has been investigated. Catalysis is observed with Cu(I) triflate, the CO complex of Cu(I) triflate, and the CO complexes of trifluoropentanedionato- and hexafluoropentanedionato Cu(I) . The best results, essentially quant. conversion, are achieved with a catalyst solution containing trifluoropentanedionato Cu(I) carbonyl and 1 equiv of BuNH_2 . No significant enantioselectivity is observed with a chiral salicyliminato Cu(II) , [(trifluoroacetyl)camphorato Cu(I) carbonyl, or a trifluoropentanedionato Cu(I) carbonyl solution containing (S)- α -

naphthylethylamine. A mechanistic interpretation involving reductive dediazonization, exo-trig radical cyclization, and cyclopropane formation by the resulting intermediate is proposed.

IT 7440-05-3, Palladium, uses and miscellaneous
 RL: CAT (Catalyst use); USES (Uses)

(catalysts, for hydrogenation of nitro(propenylacetamido)indole)

RN 7440-05-3 HCAPLUS

CN Palladium (8CI, 9CI) (CA INDEX NAME)

Pd

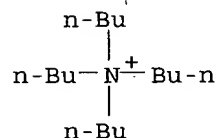
IT 1643-19-2, Tetrabutylammonium bromide

RL: RCT (Reactant); RACT (Reactant or reagent)

(cyclization of bromonitropropenylaniline in presence of, triethylamine and palladium acetate)

RN 1643-19-2 HCAPLUS

CN 1-Butanaminium, N,N,N-tributyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

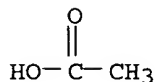
IT 3375-31-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(cyclization of bromonitropropenylaniline in presence of, triethylamine and tetrabutylammonium bromide)

RN 3375-31-3 HCAPLUS

CN Acetic acid, palladium(2+) salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Pd(II)

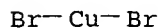
IT 7789-45-9, Copper dibromide

RL: PROC (Process)

(cyclization of diazocyclohexadienone in presence of)

RN 7789-45-9 HCAPLUS

CN Copper bromide (CuBr₂) (6CI, 8CI, 9CI) (CA INDEX NAME)

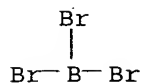


IT 10294-33-4, Boron tribromide

RL: RCT (Reactant); RACT (Reactant or reagent)
(isomerization of nitroindole derivative with)

RN 10294-33-4 HCAPLUS

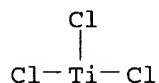
CN Borane, tribromo- (9CI) (CA INDEX NAME)



IT 7705-07-9P, Titanium chloride (TiCl₃), preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 7705-07-9 HCAPLUS

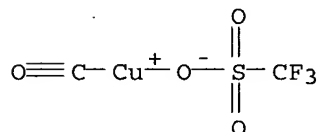
CN Titanium chloride (TiCl₃) (8CI, 9CI) (CA INDEX NAME)



IT 81967-72-8P 95345-21-4P 95345-22-5P
133471-93-9P 133471-94-0P 133574-98-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as catalyst for cyclopropanation of
diazo(propenylamino)cyclohexadienone derivs.)

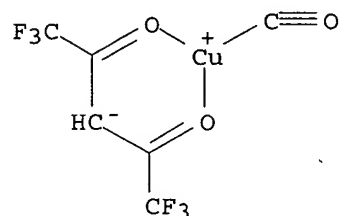
RN 81967-72-8 HCAPLUS

CN Copper, carbonyl(trifluoromethanesulfonato-κO)- (9CI) (CA INDEX NAME)



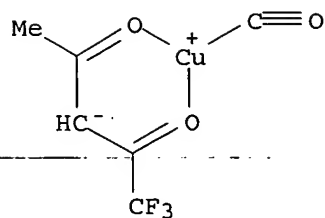
RN 95345-21-4 HCAPLUS

CN Copper, carbonyl(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-0,0')- (9CI)
(CA INDEX NAME)



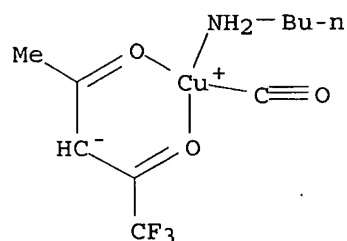
RN 95345-22-5 HCAPLUS

CN Copper, carbonyl(1,1,1-trifluoro-2,4-pentanedionato-0,0')- (9CI) (CA INDEX NAME)



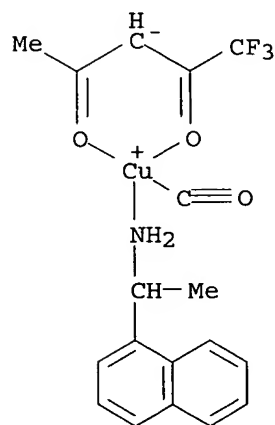
RN 133471-93-9 HCAPLUS

CN Copper, (1-butylamino)carbonyl(1,1,1-trifluoro-2,4-pentanedionato-O,O')-, (T-4)- (9CI) (CA INDEX NAME)



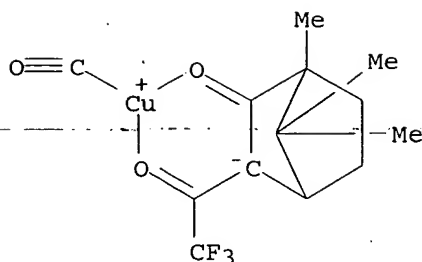
RN 133471-94-0 HCAPLUS

CN Copper, carbonyl(alpha-methyl-1-naphthalenemethanamine)(1,1,1-trifluoro-2,4-pentanedionato-O,O')-, [T-4-(S)]- (9CI) (CA INDEX NAME)

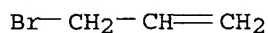


RN 133574-98-8 HCAPLUS

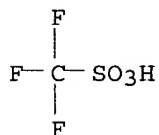
CN Copper, carbonyl[1,7,7-trimethyl-3-(trifluoroacetyl)bicyclo[2.2.1]heptan-2-onato-O,O']-, (9CI) (CA INDEX NAME)



IT 106-95-6, Allyl bromide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with (benzyloxy)bromonitroaniline)
 RN 106-95-6 HCAPLUS
 CN 1-Propene, 3-bromo- (9CI) (CA INDEX NAME)



IT 42152-44-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with carbon monoxide and
 hexafluoropentanedione)
 RN 42152-44-3 HCAPLUS
 CN Methanesulfonic acid, trifluoro-, copper(1+) salt (9CI) (CA INDEX NAME)

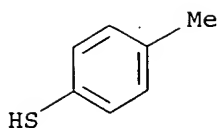


● Cu(I)

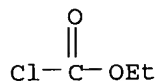
IT 630-08-0, Carbon monoxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with cuprous oxide and trifluoromethanesulfonic acid)
 RN 630-08-0 HCAPLUS
 CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



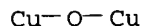
IT 106-45-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with diazocyclohexadienone)
 RN 106-45-6 HCAPLUS
 CN Benzenethiol, 4-methyl- (9CI) (CA INDEX NAME)



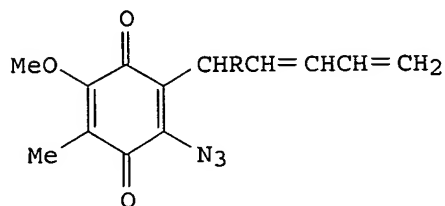
IT 541-41-3, Ethyl chloroformate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with nitro(propenylacetamido)indole)
 RN 541-41-3 HCAPLUS
 CN Carbonochloridic acid, ethyl ester (9CI) (CA INDEX NAME)



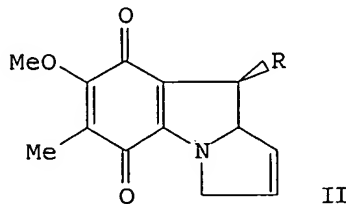
IT 1317-39-1, Cuprous oxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with trifluoromethanesulfonic acid and carbon monoxide)
 RN 1317-39-1 HCAPLUS
 CN Copper oxide (Cu₂O) (8CI, 9CI) (CA INDEX NAME)



L33 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1987:515455 HCAPLUS
 DOCUMENT NUMBER: 107:115455
 TITLE: Copper-catalyzed double cyclization reaction of azidoquinones: one-step synthesis of dihydropyrroloindoloquinones and related quinolinoquinones
 AUTHOR(S): Naruta, Yoshinori; Nagai, Naoshi; Arita, Yoshihiro; Maruyama, Kazuhiro
 CORPORATE SOURCE: Fac. Sci., Kyoto Univ., Kyoto, 606, Japan
 SOURCE: Journal of Organic Chemistry (1987), 52(18), 3956-67
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 107:115455
 GI

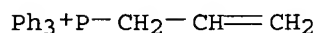


I

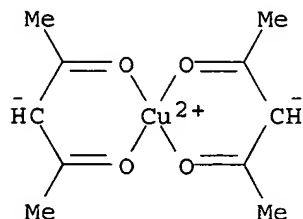


II

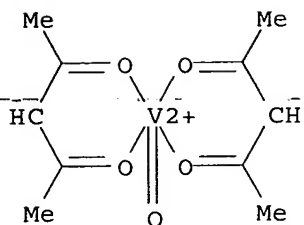
- AB Intramol. cyclization of azido(pentadienyl)quinone I (R = H) has been examined in the presence of metal salts, e.g., ML_n (M = Cu, Mn, Co, etc.; L = acetylacetonato). Copper or CuL₂ exhibited the highest catalytic activity both to the decomposition of the azide and to the formation of the corresponding dihydropyrroloindoloquinone II (R = H) which was obtained in 58% yield in one step. The related azido(hexadienyl)quinones gave the corresponding quinolinoquinone derivs. in moderate yields. Thus, pyrolysis of hexadienylquinone derivative I (R = Me) in benzene in the presence of CuL₂ afforded 27% quinolinoquinone. The double cyclization reaction proceeds with extremely high regio- and stereoselectivity, and the generality was established. Quinonoid structures and the presence of a conjugated dienyl side chain at the proximal position to an azide group are essential for the completion of this double cyclization reaction. The role of the copper catalyst to the cyclization reaction is also discussed.
- IT 1560-54-9, Allyltriphenylphosphonium bromide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (allylation of (formylethyl)benzene derivative with lithiated derivative of)
- RN 1560-54-9 HCAPLUS
- CN Phosphonium, triphenyl-2-propenyl-, bromide (9CI) (CA INDEX NAME)



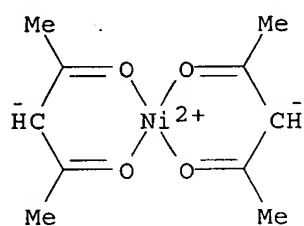
- IT 13395-16-9
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for thermal decomposition and ring closure of azido alkadienyl quinones)
- RN 13395-16-9 HCAPLUS
- CN Copper, bis(2,4-pentanedionato-κO,κO')-, (SP-4-1)- (9CI) (CA INDEX NAME)



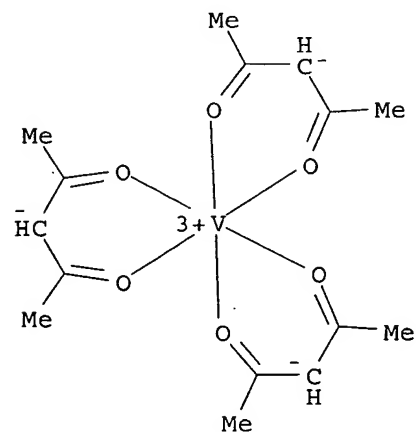
- IT 3153-26-2, Oxobis(acetylacetonato)vanadium 3264-82-2,
 Bis(acetylacetonato)nickel 13476-99-8,
 Tris(acetylacetonato)vanadium 14024-18-1,
 Tris(acetylacetonato)iron 14024-48-7, Bis(acetylacetonato)cobalt
 14024-58-9, Bis(acetylacetonato)manganese 21679-31-2,
 Tris(acetylacetonato)chromium
- RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for thermal decomposition of azidopentadienyl quinone)
- RN 3153-26-2 HCAPLUS
- CN Vanadium, oxobis(2,4-pentanedionato-κO,κO')-, (SP-5-21)- (9CI)
 (CA INDEX NAME)



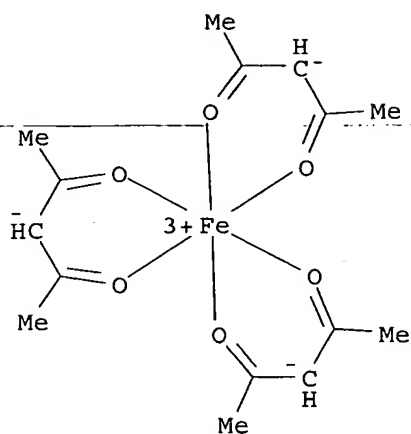
RN 3264-82-2 HCAPLUS
 CN Nickel, bis(2,4-pentanedionato-κO,κO')-, (SP-4-1) - (9CI) (CA
 INDEX NAME)



RN 13476-99-8 HCAPLUS
 CN Vanadium, tris(2,4-pentanedionato-κO,κO')-, (OC-6-11) - (9CI)
 (CA INDEX NAME)

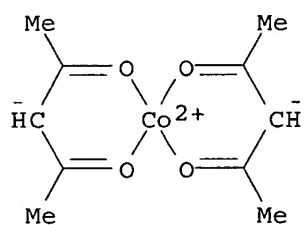


RN 14024-18-1 HCAPLUS
 CN Iron, tris(2,4-pentanedionato-κO,κO')-, (OC-6-11) - (9CI) (CA
 INDEX NAME)



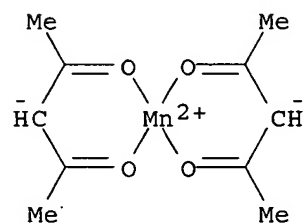
RN 14024-48-7 HCAPLUS

CN Cobalt, bis(2,4-pentanedionato- κ O, κ O')-, (SP-4-1)- (9CI) (CA INDEX NAME)



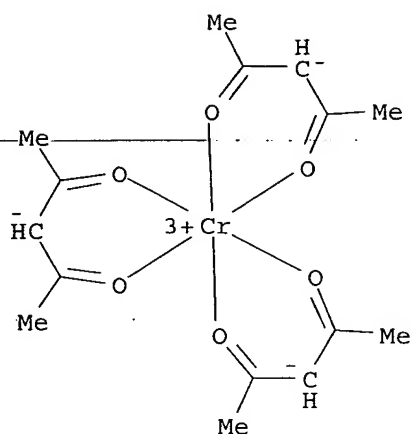
RN 14024-58-9 HCAPLUS

CN Manganese, bis(2,4-pentanedionato- κ O, κ O')- (9CI) (CA INDEX NAME)



RN 21679-31-2 HCAPLUS

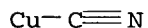
CN Chromium, tris(2,4-pentanedionato- κ O, κ O')-, (OC-6-11)- (9CI) (CA INDEX NAME)



IT 544-92-3, Cuprous cyanide 1317-39-1, Cuprous oxide, uses and miscellaneous 7440-50-8, Copper, uses and miscellaneous 7758-89-6, Cuprous chloride 7787-70-4, Cuprous bromide 10380-28-6 14024-63-6, Bis(acetylacetonato)zinc 14040-05-2 14128-84-8 14167-15-8 14172-91-9 14221-10-4 14263-53-7 14284-06-1 14284-89-0, Tris(acetylacetonato)manganese 14324-82-4 14405-48-2 14523-25-2 14781-49-8 21679-46-9, Tris(acetylacetonato)cobalt 42152-44-3, Cuprous triflate
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for thermal decomposition of azidopentadienylquinone)

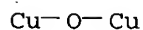
RN 544-92-3 HCAPLUS

CN Copper cyanide (Cu(CN)) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1317-39-1 HCAPLUS

CN Copper oxide (Cu₂O) (8CI, 9CI) (CA INDEX NAME)



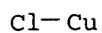
RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7758-89-6 HCAPLUS

CN Copper chloride (CuCl) (8CI, 9CI) (CA INDEX NAME)



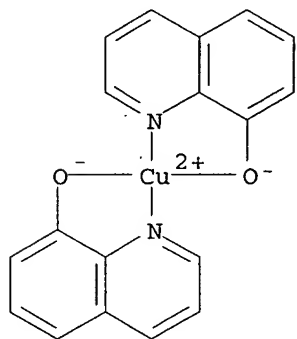
RN 7787-70-4 HCAPLUS

CN Copper bromide (CuBr) (8CI, 9CI) (CA INDEX NAME)

Br—Cu

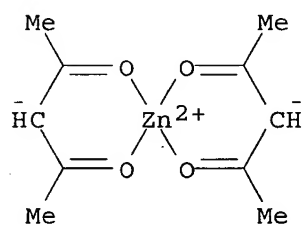
RN 10380-28-6 HCAPLUS

CN Copper, bis(8-quinolinolato- κ N1, κ O8)- (9CI) (CA INDEX NAME)



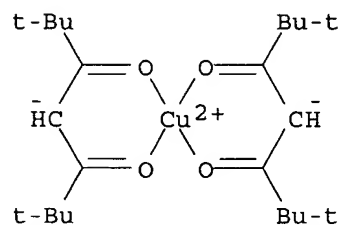
RN 14024-63-6 HCAPLUS

CN Zinc, bis(2,4-pentanedionato- κ O, κ O')-, (T-4)- (9CI) (CA INDEX NAME)



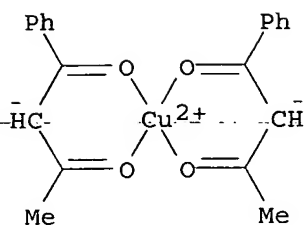
RN 14040-05-2 HCAPLUS

CN Copper, bis(2,2,6,6-tetramethyl-3,5-heptanedionato- κ O, κ O')- (9CI) (CA INDEX NAME)



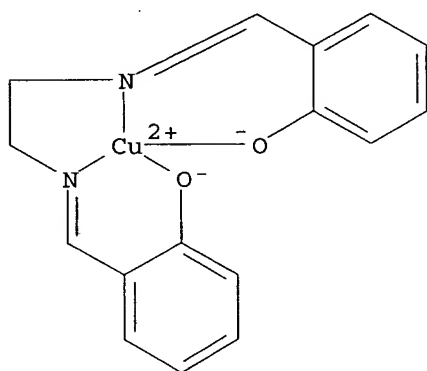
RN 14128-84-8 HCAPLUS

CN Copper, bis(1-phenyl-1,3-butanedionato- κ O, κ O')- (9CI) (CA INDEX NAME)



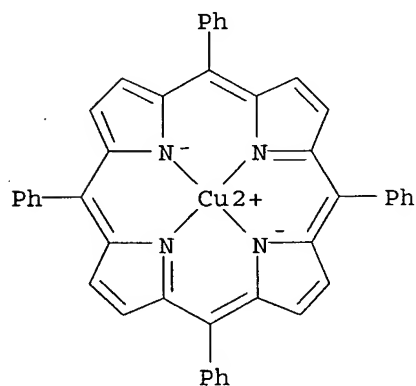
RN 14167-15-8 HCAPLUS

CN Copper, [[2,2'-[1,2-ethanediylbis[(nitrilo-κN)methylidyne]]bis[phenolato-κO]](2-)]-, (SP-4-2) - (9CI) (CA INDEX NAME)



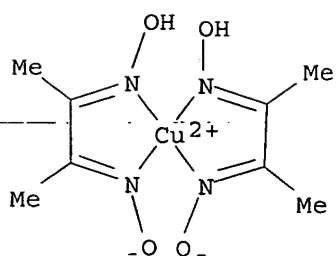
RN 14172-91-9 HCAPLUS

CN Copper, [5,10,15,20-tetraphenyl-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]]-, (SP-4-1) - (9CI) (CA INDEX NAME)



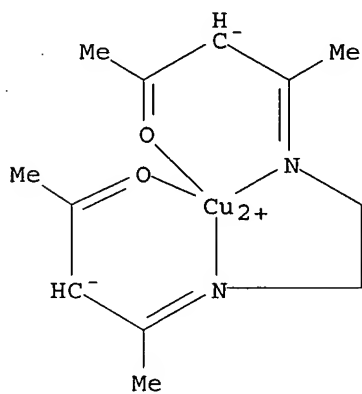
RN 14221-10-4 HCAPLUS

CN Copper, bis[[2,3-butanedione di(oximato-κN)](1-)]-, (SP-4-1) - (9CI) (CA INDEX NAME)



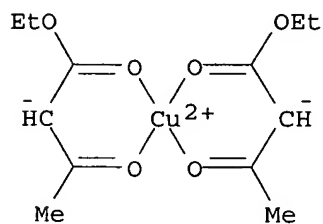
RN 14263-53-7 HCAPLUS

CN Copper, [[4,4'-[1,2-ethanediyl]di(nitrilo-κN)]bis[2-pentanonato-κO]](2-)]-, (SP-4-2)-(9CI) (CA INDEX NAME)



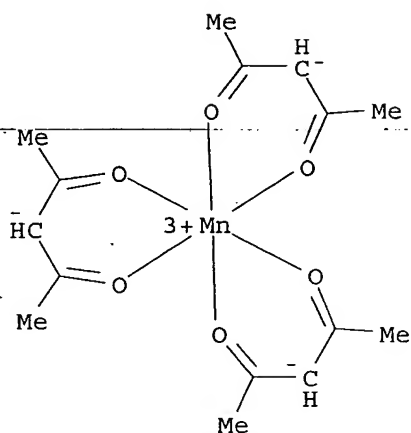
RN 14284-06-1 HCAPLUS

CN Copper, bis[ethyl 3-(oxo-κO)butanoato-κO']-(9CI) (CA INDEX NAME)



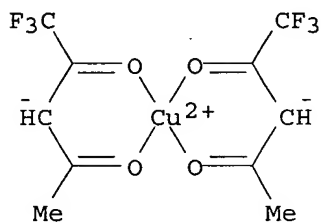
RN 14284-89-0 HCAPLUS

CN Manganese, tris(2,4-pentanedionato-κO,κO')-(9CI) (CA INDEX NAME)



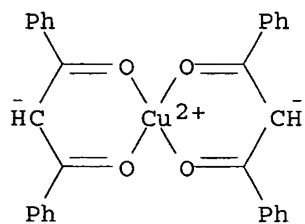
RN 14324-82-4 HCAPLUS

CN Copper, bis(1,1,1-trifluoro-2,4-pentanedionato-κO,κO')-, (9CI)
(CA INDEX NAME)



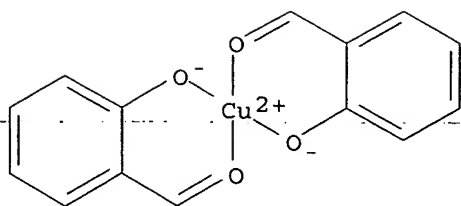
RN 14405-48-2 HCAPLUS

CN Copper, bis(1,3-diphenyl-1,3-propanedionato-κO,κO')-,
(SP-4-1)- (9CI) (CA INDEX NAME)



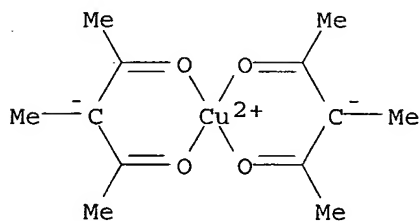
RN 14523-25-2 HCAPLUS

CN Copper, bis[2-(hydroxy-κO)benzaldehydato-κO]- (9CI) (CA INDEX
NAME)



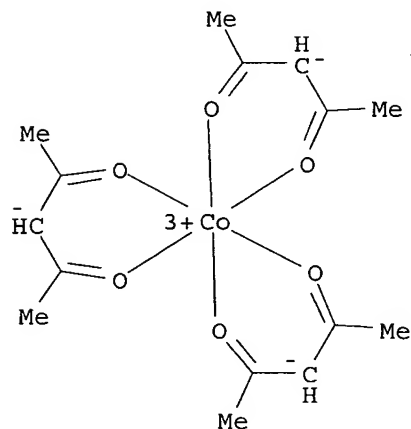
RN 14781-49-8 HCAPLUS

CN Copper, bis(3-methyl-2,4-pentanedionato-κO,κO')- (9CI) (CA INDEX NAME)



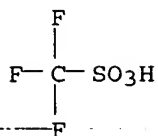
RN 21679-46-9 HCAPLUS

CN Cobalt, tris(2,4-pentanedionato-κO,κO')-, (OC-6-11)- (9CI) (CA INDEX NAME)



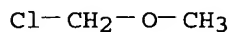
RN 42152-44-3 HCAPLUS

CN Methanesulfonic acid, trifluoro-, copper(1+) salt (9CI) (CA INDEX NAME)



● Cu(I)

IT 107-30-2, Chloromethyl methyl ether
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (methoxymethylation by, of substituted phenols)
 RN 107-30-2 HCAPLUS
 CN Methane, chloromethoxy- (9CI) (CA INDEX NAME)



L33 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:33289 HCAPLUS

DOCUMENT NUMBER: 106:33289

TITLE: E and C parameters from Hammett substituent constants and use of E and C to understand cobalt-carbon bond energies

AUTHOR(S): Drago, Russell S.; Wong, Ngai; Bilgrien, Carl; Vogel, Glenn C.

CORPORATE SOURCE: Chem. Dep., Univ. Florida, Gainesville, FL, 32611, USA

SOURCE: Inorganic Chemistry (1987), 26(1), 9-14

CODEN: INOCAJ; ISSN: 0020-1669

DOCUMENT TYPE: Journal

LANGUAGE: English

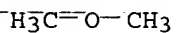
AB An updated list of E and C parameters was calculated from a larger data base than that used in an earlier fit. The new data base included 42 acids, 55 bases, and about 500 data points. Best-fit parameters for 13 enthalpy-frequency shift relations were also reported. From this updated list, relationships were discovered which lead to equations that enabled calcn. of E and C parameters from Hammett substituent consts. for a series of substituted phenols and pyridines. This procedure provided a simple method for greatly increasing the number of acids and bases included in the correlation. An E and C anal. was used to study the dissociation energy of the Co-C bond in alkyl-substituted bis(dimethylglyoximate)cobalt(II) complexes. This anal. gave calculated dissociation energies that were within exptl. error of the measured values and gave a value for Co-C bond dissociation for the unligated complex. The basic procedure allows for the incorporation of ligand influence on bond dissociation energies into the correlation.

IT 115-10-6, Dimethyl ether 123-91-1, Dioxane, properties 141-78-6, Ethyl acetate, properties 142-96-1, Dibutyl ether 150-19-6, m-Methoxyphenol 150-76-5, p-Methoxyphenol 352-93-2, Diethyl sulfide 371-41-5, p-Fluorophenol 626-55-1, 3-Bromopyridine 629-82-3, Di-n-octyl ether 7789-33-5 12081-18-4 14781-45-4, Bis(hexafluoroacetylacetonato)copper(II)
 RL: RCT (Reactant); RACT (Reactant or reagent)

(electrostatic and covalent parameters of)

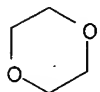
RN 115-10-6 HCAPLUS

CN Methane, oxybis- (9CI) (CA INDEX NAME)



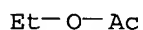
RN 123-91-1 HCAPLUS

CN 1,4-Dioxane (9CI) (CA INDEX NAME)



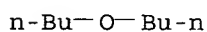
RN 141-78-6 HCAPLUS

CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)



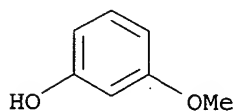
RN 142-96-1 HCAPLUS

CN Butane, 1,1'-oxybis- (9CI) (CA INDEX NAME)



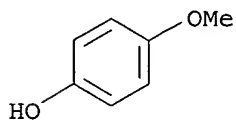
RN 150-19-6 HCAPLUS

CN Phenol, 3-methoxy- (9CI) (CA INDEX NAME)



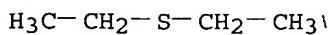
RN 150-76-5 HCAPLUS

CN Phenol, 4-methoxy- (9CI) (CA INDEX NAME)



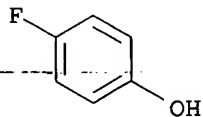
RN 352-93-2 HCAPLUS

CN Ethane, 1,1'-thiobis- (9CI) (CA INDEX NAME)



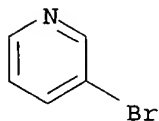
RN 371-41-5 HCAPLUS

CN Phenol, 4-fluoro- (9CI) (CA INDEX NAME)



RN 626-55-1 HCAPLUS

CN Pyridine, 3-bromo- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 629-82-3 HCAPLUS

CN Octane, 1,1'-oxybis- (9CI) (CA INDEX NAME)

Me- (CH₂)₇-O- (CH₂)₇-Me

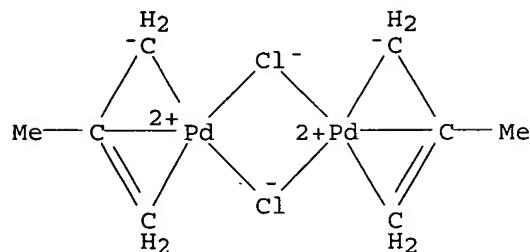
RN 7789-33-5 HCAPLUS

CN Iodine bromide (IBr) (6CI, 8CI, 9CI) (CA INDEX NAME)

Br- I

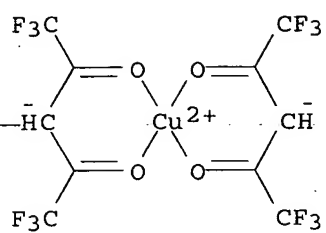
RN 12081-18-4 HCAPLUS

CN Palladium, di-μ-chlorobis[(1,2,3-η)-2-methyl-2-propenyl]di- (9CI)
(CA INDEX NAME)



RN 14781-45-4 HCAPLUS

CN Copper, bis(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-κO,κO')-
, (SP-4-1)- (9CI) (CA INDEX NAME)



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